

THE ABILITY OF THE KOLBE A INDEX ACTION MODES TO PREDICT  
LEARNERS' ATTITUDES AND ACHIEVEMENTS WITHIN A WEB-BASED  
TRAINING CONTEXT

A Dissertation

by

SASICHA WONGCHAI

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2003

Major Subject: Educational Human Resource Development

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December 2003

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## ABSTRACT

The Ability of the Kolbe A Index Action Modes to Predict Learners' Attitudes and Achievements within a Web-based Training Context. (December 2003)

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The purpose of this study was to investigate the ability of the Kolbe A Index to predict learners' attitudes and achievements within a web-based training context. The Index is used to measure the conative capacities of individuals. The Index translates raw scores into four Action Modes: Fact Finder, Follow Thru, Quick Start, and Implementor. A web-based simulation of training on customer service excellence was created containing four modules designed to match the respective learning style of each of the four Action Modes suggested by the Kolbe Corporation.

Research questions were as follows. To what extent do the four Kolbe A Index Action Modes predict 1) how well learners will like content formatted to match the learning styles of the four Modes, 2) how well learners will remember content formatted to match the learning styles of the four Modes, and 3) how well the learners will remember the content regardless of the format?

Three experts in applications of the Kolbe A Index then validated the simulation. Five other experts, each with a Ph.D. in the social sciences, validated the evaluation of learners' attitudes and achievements. Then a pilot study to collect data for a reliability analysis was conducted.

Sixty graduates from an international program in economics in Thailand participated in this study. Data were collected entirely through the Internet and in English. Multiple linear regression analyses with backward stepping method were performed to answer the research questions. Based on the limitations and data analyses of this study, the Kolbe A Index Action Modes did not predict how well learners liked content formatted to match the learning styles of the four Modes, how well learners remembered content formatted to match the learning styles of the four Modes, nor how well the learners remembered the content regardless of the format. More research is needed to explore how the Kolbe A Index Action Modes can be used to predict learners' attitudes and achievements.

## DEDICATION

To my parents – Dr. Vichai and Professor Yupa Wongchai

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## CHAPTER I

### INTRODUCTION

This chapter provides an introduction to this study. The chapter contains the following sections: background of the study, statement of the problem, purpose of the study, significance of the study, operational definitions, assumptions of the study, limitations of the study, and organization of the rest of this dissertation.

#### **Background of the Study**

There has been a fundamental change in the business world: a shift from mass production to mass customization (Chen, Wang, & Wong, 2001). In the mass production era, economy of scale was a guiding principle in business because it drove prices down (Addis & Holbrook, 2001). Products and services in this era came with little variations. Customers accepted less customization of goods and services in return for lower prices. Recently, technological innovations have allowed firms to produce and distribute individually customized goods and services for a mass market. Products and services are still produced by mass production; however, they are allowed variations to fit the needs and desires of individual customers.

One example of a company that has successfully adapted to mass customization is Dell Computer Corporation (Byrd, 2001). Dell sells its computers directly to customers by building products to order. Customers of Dell can customize their

computers individually by choosing only the components and software that fit their needs and their budget. The process of customization allows Dell to respond to customers' needs quickly yet reach a large market. Thus, Dell has gained a competitive advantage in this fast-paced industry by adapting to mass customization.

The concept of mass customization has been adopted in various areas of business including manufacturing and operations management (Ahlstrom & Westbrook, 1999; Chen, Wang, & Wong, 2001), service management (Van Hoek, 2000), marketing (Addis & Holbrook, 2001; Liechty, Ramaswamy, & Cohen, 2001), and training (Stimpson, 2000).

Human resource development, a field focused on learning, is also affected by technological innovations and mass customization (Stimpson, 2000). "Most obviously, the delivery of training has moved from a one-size-fits-all workshop model to 'mass customization' and quick-response programs, usually involving new technology" (p. 44). Training participants, just like customers in the mass customization era, come with unique needs and preferences. The participants expect their needs and preferences to be met at competitive prices.

Currently, information technologies such as the Internet along with other instructional technologies have enabled training to be produced and delivered to a mass market (Brown, 2000). Training can be delivered instantly to large groups of people at different locations around the world. In other words, existing technologies have already allowed mass production for training/education. However, the customization part of mass customization still needs further scrutiny through research and practice.

In the mass customization era, a basic question emerges: How can we customize training to fit individual preferences? The answer to this question was the focus of this research.

### **Statement of the Problem**

There has been rapid growth in the distance learning area because of technological innovations, such as the Internet (Coleman-Ferrell, 2001; Harrison, 2002). The Internet allows instruction to be delivered anytime and anywhere in the world. This removes the barriers of proximity and differences in time zones and thus improves the accessibility of education. The growth of distance education has been observed in many countries including Thailand (Sirisunyaluck, 1999; Wat-Aksorn, 2000). The Royal Thai Government founded a university that specializes in distance education and launched national information technology plans to capture the best uses of such technologies (Na-Songkhla, 1998; Pongthinhongngam, 2003; Suriyasarn, 2003).

When designing distance education courses, various factors must be included in the instructional design process. Various authors (e.g., Rodriguez, 2002; Wat-Aksorn, 2000) have found learners' style to be important to instructional design. In the past, many researchers have focused on the cognitive styles of students (Snow, Corno, & Jackson, 1996). Cognition, however, is only one aspect of the human mind. The other two aspects, affection<sup>1</sup> and conation<sup>2</sup>, have often been neglected in education. The latter

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<sup>1</sup> Part of human mind that deals with emotion, temperament, mood, and attitude (Snow, Corno, & Jackson, 1996).

<sup>2</sup> "the tendency to take and maintain purposive action or direction toward goals" (Snow, Corno, & Jackson, 1996, p. 266).

two have been shown to contribute to students' success (Atman, 1987; Giles, 1999; Jackson, 2000; Snow, Corno, & Jackson, 1996).

The concept of conation has been utilized both in research and practice (Atman, 1987; Bailey, 2002; Corno, 1993; Fitzpatrick, 2000; Giles, 1999; Harper, 1997; Hilgard, 1980; Jackson, 2001; Kolbe Corporation, 2002a; Lingard & Berry, 2000, 2002; Snow, Corno, & Jackson, 1996; Thomas, 1998). Researchers, like Snow, Corno, & Jackson (1996) and Atman (1987), have proposed a taxonomy of conation. Atman also developed an instrument called the Goal Orientation Inventory (GOI) to determine goal accomplishment style, a construct of conation. The instrument has been used in research including a study of distance learners. Kolbe (1993) developed an instrument called the Kolbe A Index to measure conative styles, which can be categorized into four Action Modes: Fact Finder, Follow Thru, Quick Start, and Implementor. Businesses have used the Kolbe A Index extensively for career development, personnel selection, team management, consulting, and training (Kolbe Corporation, 2002c).

Training has been an essential component for organizations because of increased competition and new innovations (Swanson & Holton, 2001). Organizations must keep their employees informed of current trends in the business world. One area that requires frequent training is customer service because of its importance to organizations and the high turnover rate of employees in this area (Holley, 2003; Lin & Darling, 1997). Therefore, there is a need for effective and efficient training delivery such as through the Internet.



The Kolbe A Index, an instrument that measures conation, appears to have never been included in the design of distance education or web-based training. In addition, the instrument also appears to have never been used in designing customer service training nor studied in Thailand.

This study was an attempt to use the Kolbe A Index to predict web-based learners' attitudes and achievements. The study was approved by the Institutional Review Board at Texas A&M University.

### **Purpose of the Study**

The purpose of this study was to investigate the ability of the Kolbe A Index to predict learners' attitudes and achievements within a web-based training context. The Kolbe Corporation suggests learning styles that match each of its four Action Modes (Kolbe Corporation, 1999). Those learning styles were used as guidelines in designing a web-based simulation of training for this study. Then the learning outcomes (i.e., attitudes and achievements) were measured. Three specific research questions were asked in this study:

1. To what extent do the four Kolbe A Index Action Modes (Fact Finder, Follow Thru, Quick Start, and Implementor) predict how well learners will like content formatted to match the learning styles of the four Modes?
2. To what extent do the four Kolbe A Index Action Modes predict how well learners will remember content formatted to match the learning styles of the four Modes?
3. To what extent do the four Kolbe A Index Action Modes predict how well the learners will remember the content regardless of the format?

### **Significance of the Study**

An important role of the human resource development professional is to seek an understanding of learners and their learning processes and outcomes (Mackeracher, 1996). However, a challenge lies in the uniqueness that each learner brings to a classroom. “Teachers and educational designers need to understand student variations in attitude, motivation, and style as well as ability. They need to adapt instruction to the strengths, weaknesses, preferences, and predilections of different students. They also seek to identify and capitalize on individuality and to promote its further development” (Snow, Corno, & Jackson, 1996, p. 244).

One facet of student variations is conation. It can be essential in the distance education area. “Why should educators be concerned with conation? Success in a

classroom requires certain attitudes, skills, and abilities from a student. From personal experience and conversations with students taking classes in the online format, I would argue that online classes require more discipline and time management skills. Perhaps the skills and abilities we are looking for in students have a conative component” (Giles, 1999, p. 22). If we, human resource development professionals, could determine whether the Kolbe A Index contributes to learning outcomes, we could draw on it in instructional design processes in order to optimize students’ performances. Then, we could move one step further toward the goal of human resource development professionals – to enhance human learning.

### **Operational Definitions**

The following terms are used often and can be defined specifically for this study as follows:

*Achievement.* Previous learning (Kaplan & Saccuzzo, 2001). It includes memory and comprehension immediately after reviewing the content of a learning module. Achievement in this study was measured by 100 multiple-choice questions extracted directly from the content of the learning modules. There were 25 questions in each learning module (see Appendix E).

*Action Modes® or Action Modes.* Distinct clusters of behaviors that are categorized into four modes: Fact Finder, Follow Thru, Quick Start, and Implementor (Kolbe Corporation, 2002b). These four Action Modes are constructs of conation. They may be measured by the Kolbe A Index.

*Attitude.* Overall feelings toward an object (Cheng, 2003). In this study, attitude refers to the extent to which participants like each learning module. It was measured by Attitude Questions #1 and #2. Chapter III contains the actual questions.

*Conation.* “the tendency to take and maintain purposive action or direction toward goals” (Snow, Corno, & Jackson, 1996, p. 266). Conation may be measured by the Kolbe A Index.

*Distance Education.* “...education or training courses delivered to remote (off-campus) sites via audio, video (live or prerecorded), or computer technologies, including both synchronous (i.e., simultaneous) and asynchronous (i.e., not simultaneous) instruction” (Waits, Lewis, & Greene, 2003, p. 1).

*Distance Learning.* Synonym for *distance education*.

*Fact Finder.* “The Action Mode that deals with detail and complexity, and provides perspective of experience” (Kolbe Corporation, 1999, p. 30). This Action Mode may be measured by the Kolbe A Index. The scores range from one to ten. An individual who scores high (seven to ten) in this Mode “will most likely succeed at tasks which require an individual to: probe, research, formalize, allocate, deliberate, prioritize, define, prove, specify, calculate, inquire, and evaluate” (Kolbe Corporation, 2002a, p. 3).

*Follow Thru.* “The Action Mode that deals with structure and order, and provides focus and continuity” (Kolbe Corporation, 1999, p. 30). This Action Mode may be measured by the Kolbe A Index. The scores range from one to ten. An individual who scores high (seven to ten) in this Mode “will most likely succeed at tasks which require

an individual to: structure, consolidate, translate, prepare, discipline, coordinate, arrange, integrate, schedule, plan, budget, and chart” (Kolbe Corporation, 2002a, p. 3).

*Implementor.* “The Action Mode that deals with physical space and ability to operate manually, and provides durability and a sense of the tangible” (Kolbe Corporation, 1999, p. 30). This Action Mode may be measured by the Kolbe A Index. The scores range from one to ten. An individual who scores high (seven to ten) in this Mode “will most likely succeed at tasks which require an individual to: form, mold, demonstrate, craft, shape, put together, build, render, construct, fix, repair, and practice” (Kolbe Corporation, 2002a, p. 3).

*Kolbe A™ Index or Kolbe A Index.* “The Kolbe A Index is a forced-choice instrument which requires subjects to choose one of four responses reflecting how they would be most and least likely to respond to 36 single-sentence problem-solving or behavioral scenarios” (Thomas, 1998, p. 1).

*Learning Styles.* In this study, the term refers to learning styles that match the four Action Modes suggested the Kolbe Corporation (1999). Individuals who score high (seven to ten) on Fact Finder will tend to study book on the subject to see how it has been done in the past; Follow Thru will tend to learn the theory or formula; Quick Start will tend to experiment with radical ideas and innovations; and Implementor will tend to work with models or prototypes.

*Multicollinearity.* Any correlation among predictors in multiple regression analysis.

*Quick Start.* “The Action Mode that deals with originality and risk-taking, and provides intuition and a sense of vision” (Kolbe Corporation, 1999, p. 30). This Action Mode may be measured by the Kolbe A Index. The scores range from one to ten. An individual who scores high (seven to ten) in this Mode “will most likely succeed at tasks which require an individual to: invent, brainstorm, originate, devise, challenge, contrive, risk, play hunches, reform, improvise, promote, and intuit” (Kolbe Corporation, 2002a, p. 3).

*Simulation.* “A representation of a piece of equipment or a system that allows the user to give inputs and see the system’s typical response. Simulation allows the ‘use’ of the equipment without the potential of harming the equipment or person” (Steinmetz & Kwinn, 2000, p. 215). The simulation in this study refers to the web-based simulation of training on customer service excellence.

*Web-based Instruction.* Synonym for *web-based training*.

*Web-based Training.* “It describes text-based lessons sent via e-mail, training materials or files copied across the Internet, multimedia online books viewed with a browser, and live-instructor led video and audio exchanges delivered via the Internet” (Driscoll & Reid, 1999, 74). In this study, a web-based simulation with no interaction between the instructor and the participants was designed.

### **Assumptions of the Study**

1. A learner-centered approach was assumed. “The learner centered approach focuses primarily on the learner and the learning process, and secondarily on those who help the learner learn” (Mackeracher, 1996, p. 2). For this study, it was assumed that instructional designers need to design study materials to fit learners’ preferences or styles. In addition, that need was considered important enough to devote time and resources to investigate how to fulfill the need.
2. Participants in this study were assumed to have sufficient skills and abilities to execute the tasks required to complete the web-based simulation. The skills and abilities included intelligence, reading ability, English proficiency, basic computer literacy (e.g., how to turn a computer on and off, how to use a computer mouse), and Internet skills (e.g., how to connect to the Internet, how to open a browser).
3. All participants were assumed to have equal previous knowledge of customer service.
4. The participants were assumed that they did not consult other people or study materials besides what had been given when taking the achievement tests.
5. The order of learning modules was assumed to have no effect in learning outcomes.

### **Limitations of the Study**

1. Extraneous factors could affect the outcomes of this study. Examples of environmental factors that could affect this study include lighting, room temperature, and classroom layout (Desai, Richards, & Eddy, 1999). Such factors cannot be controlled in this study because participants lived in disperse locations.
2. Because a simulation of web-based training was used, the participants were not real trainees. They might not have been motivated to excel in the training. Motivation can be an important factor affecting the effectiveness of web-based training (Cifuentes & Shih, 2001).
3. The participants were from a select group of people in Thailand. The results of this study can be applied only to this group.

### **Organization of the Rest of this Dissertation**

Chapter II provides a selected literature review related to this study. The methodology of this study is described in Chapter III. Chapter IV reports the results of this study. Chapter V contains a summary, conclusions, and recommendations for further study.



## CHAPTER II

### REVIEW OF THE LITERATURE

This section presents a selective review of the literature that relates to this study. The chapter is divided into six sections in the following order: Thailand and the Internet, Distance Learning, Web-based Learning, Conation, the Kolbe A Index and Its Applications, and Customer Service. A chapter summary is presented at the end.

#### **Thailand and the Internet**

The Internet has revolutionized many areas including communications, trading, education and training (Brown, 2000; Evans & Haase, 2001). The Internet was introduced to Thailand in the late 1980s (Suriyasarn, 2003). In the early days, the government restricted the use of the Internet to researchers, academicians, engineers, and computer professionals (Na-Songkhla, 1998, Suriyasarn, 2003). In the late 1990s, the government allowed the commercialization and privatization of the Internet. The Internet then gained in popularity among the general public. At the same time, the market for the Internet became fiercely competitive. Access fees dropped. More users were connected. High speed broadband was launched. Foreign companies competed with local service providers. In addition, a government agency is providing free Internet service to every household with a phone line (Pongthinhongngam, 2003). The Internet growth in Thailand has been explosive. The number of users has been increasing more than 50 percent each year (Suriyasarn, 2003).

In 1995, a government agency called the National Information Technology Committee initiated a national policy for developing the country's information technology (IT) potential (Na-Songkhla, 1998; Ponthinhongngam, 2003; Suriyasarn, 2003). The policy was called "IT 2000 Social Equity & Prosperity: Thailand IT Policy into the 21<sup>st</sup> Century" or "IT 2000 Plan." Its goal was to advance the country's competitiveness at an international level. The plan was grounded on three pillars: telecommunication infrastructure, human resource development, and good governance (Suriyasarn, 2003). The IT 2000 was a crucial factor in development of the Internet in Thailand (Na-Songkhla, 1998; Ponthinhongngam, 2003; Suriyasarn, 2003). However, the IT 2000 ended with limited success because of government's limited capability to oversee IT projects and the economic crisis in the late 1990s (Pongthinhongngam, 2003).

A similar plan was developed called IT 2010 (Ponthinhongngam, 2003; Suriyasarn, 2003). The goals of IT 2010 are slightly different: 1) investing in knowledge-based human resources, 2) promoting the creation of new technologies, and 3) investing in information technology infrastructure (Ponthinhongngam, 2003). The IT 2010 contains strategic areas while IT 2000 did not. Five strategic areas specified in IT 2010 are governmental development (e-government), commercial development (e-commerce), industrial development (e-industry), educational development (e-education), and social development (e-society). For education, five specific tasks were identified: 1) founding a national program for digital content development, 2) founding a national teacher's training program, 3) building an educational network, 4) investing in domestic

computer production to reduce imports, and 5) founding the national institute of technology for education.

In addition to IT Plans, the privatization of Internet services was reinforced by other forces (Pongthinhongngam, 2003). Externally, privatization and liberalization of the telecommunications industry was enforced by two institutions. First, the International Monetary Fund (IMF) required the privatization and liberalization as a condition of an economic restructuring loan received during the economic crisis. Second, the World Trade Organization (WTO) also enforced the International Telecommunications Agreement in 1997 that aims to privatize and liberalize telecommunications markets around the world. Internally, Thailand's current Prime Minister, Dr. Thaksin Shinawatra, a telecommunications industry tycoon who owned wireless networks, satellites for communication and education, and Internet service providers, became a driving force in IT development.

### **Distance Learning**

Historically, distance learning started in the United States in the form of correspondence study during the 1880s (Coleman-Ferrell, 2001; Evans & Haase, 2001). Printed materials were distributed to students in disparate areas. Later, information technologies allowed easier and faster information sharing. Since then, distance learning has grown rapidly. This growth of distance education occurred not only in the United States but in other countries like the United Kingdom, Australia, Turkey, China, and Thailand (Harrison, 2002; Sirisunyaluck, 1999). Andalou University in Turkey has the

largest distance education enrollment of 570,000 students (Harrison, 2002). China TV University System has the second largest enrollment of 550,000 students. The advantages of distance education include accessibility and flexibility for students (Driscoll, 1998; Harrison, 2002; Holley, 2003; Huang, 1997). The disadvantages include high start-up costs because of the investment in infrastructure and technical skills (Harvell, 2000).

In the United States, the National Center for Education Statistics (NCES) collected data regarding distance education from two-year and four-year Title IV-eligible, degree granting institutions during the 2000-2001 academic year (Waits, Lewis, & Greene, 2003). The total number of institutions surveyed was 4,130. Some key findings are summarized here.

- 56 percent of the institutions offered distance education courses
- 12 percent of the institutions planned to start offering distance education courses in the next three years
- 31 percent of the institutions did not offer distance education courses and did not plan to offer any in the next three years
- 19 percent of the institutions had degree or certificate programs that were designed to be completed through distance education
- Public institutions were more likely to offer distance education courses than private institutions (89 percent versus 33 percent)
- The most often used technologies were the Internet and video technologies

- 90 percent of institutions that offered distance education courses delivered them through the Internet using asynchronous computer-based instruction
- Among the institutions that did not offer distance education courses in 2000-2001, the factors that limited their *starting* included lack of fit with the institutions' mission (44 percent), program development costs (33 percent), concerns about course quality (26 percent), limited technological infrastructure to support distance education (24 percent), and lack of perceived need (22 percent). However, except for program development costs, these factors were not perceived to limit the *expansion* of distance education courses by institutions that offered distance education in 2000-2001.

Course quality of distance education courses, as cited above, has been a concern among higher education institutions. Many studies have compared the effectiveness of traditional classroom and distance education settings. Russell (1999) gained notoriety by introducing the “no significant difference phenomenon.” He compiled approximately 400 annotated bibliographies from 1928 to present that compared the effectiveness of traditional classroom instruction and that of technology-delivered instruction. He showed that there were *no significant* differences in learning outcomes between the two settings. A print version of the compendium features 355 studies (Russell, 1999). However, the most recent version is available online (TeleEducation New Brunswick, 2003a). Russell has also posted on the same website a list of the studies that showed

*significant* differences between the two settings, but the list contains much fewer studies than those of no significant differences (TeleEducation New Brunswick, 2003b).

Although Russell's compendium is one of the most cited studies, it is not free from criticism. Cited concerns include featured studies' methodological flaws (e.g., lack of control groups, randomization, and statistical sophistication), lack of a theoretical framework, not accounting for students' learning styles, and focusing on evaluating courses as opposed to evaluating programs (Meyer, 2002). A counter argument, according to Meyer (2002), is that technology merely provides an alternative way of delivering instruction. The quality of learning is largely affected by the instructional method embedded in the technology and not by the technology itself. The effectiveness of distance learning is still an ongoing debate.

In Thailand, distance education was pioneered by Sukhothai Thammathirat Open University (STOU) in 1978 (Sirisunyaluck, 1999). STOU was intended to reach out to provinces where people lack access to traditional higher education institutions, to facilitate lifelong education, and to respond to an increasing demand for postsecondary education. Despite its being an open university, STOU holds the same rights and status as other universities under the Ministry of University Affairs. Similar to other universities, STOU offers bachelor degrees, masters degrees, certifications, and continuing education (STOU, 2003b). In addition, STOU coordinates with Charles Sturt University, the largest distance education university in Australia, to offer Ph.D. programs in Thailand (STOU, 2003c).

The uniqueness of STOU is that all academic programs are designed for students to study independently without ever entering a traditional classroom (Sirisunyaluck, 1999). In fact, STOU does not have traditional classrooms. Instruction is delivered via multimedia such as printed materials, radio, television, videotapes, and audiotapes. These study materials are produced by a team composed of subject specialists from both inside and outside the university, a media specialist, an evaluation specialist, an editor, and a secretary. The study materials are distributed directly to the students. The university owns television and radio stations that broadcast nationwide. In addition, the university has provided support services for students including regional and local study centers; special study centers for programs requiring special learning settings such as laboratories or fieldwork; central, regional, and provincial libraries and educational media services; regional and provincial guidance and counseling services; tutoring services; newsletters; and student clubs. In each province, there must be a library and a study center in order to ensure local accessibility. Students at STOU are evaluated by final exams held at local study centers on the same day and time throughout the country. In addition, they are evaluated with regard to their practical work, research, and residential workshops. In 1995, STOU received the Award of Excellence from the Norway-based International Council for Distance Education in the category of Excellence of Distance Education Management (STOU, 2003a). STOU won over nominees from 79 other countries.

Besides STOU, other leading Thai universities now offer distance education courses. These universities include Chulalongkorn University (2003), Thammasat University (2003), and Chiang Mai University (2003).

### **Web-based Training**

In education, the Internet has expanded many educational opportunities (Hunhueon, 2002). Web-based instruction has supplemented and in some cases even replaced face-to-face instruction. From a student's perspective, the benefits of web-based instruction include a flexible and dynamic learning environment, multimedia and nonlinear presentations, instruction delivery that is independent of geographic location or the time of day, and accessibility to potentially rich and collaborative learning (Brown, 2000; Cifuentes & Shih, 2001; Coleman-Ferrell, 2001; Driscoll, 1998; Evans & Haase, 2001). From a business perspective, web-based training appears to be a cost-effective means to deliver training because it saves costs such as travel expenses, facilities costs, instructor fees, and lost productivity on the job (Evans & Haase, 2001; McFeely, 2003).

Despite the benefits, web-based learners have encountered some difficulties. Ford & Murphy (2002) reported that computer illiteracy of the students may have limited their learning. Robin, Tellez, & Miller (1998) found that novice telecomputing users experienced significant frustration during their training sessions. Huang (1997) reported that web-based trainees had to adapt significantly to understand the large amounts of written information available on the Internet and in e-mails. Reading skills



may play an important role in distance learning. Harrell (1999) found that both poor reading and writing skills could jeopardize learning through the Internet. Johnson (2000) reported that the diversity of learners in their knowledge, skills, background, and learning needs could hinder the usability of web-based training that provided one-size-fits-all presentations. Pollard & Hillage (2001) stated that some individual learning styles might not fit with the current application of web-based training (i.e., passive, limited interaction with peers and teachers, etc.). In addition, not all types of training can be implemented online (Brown, 2000). For example, if learning objectives include tasks that require interpersonal skills, traditional classrooms might yield better results.

Another perceived downfall of web-based training and distance education is development costs. Harvell (2000) investigated the costs and benefits of incorporating web-based materials as supplements to traditional classroom teaching. The costs were measured by the number of hours spent on developing the web-based materials. She and her colleagues spent a total of 189 hours on programming, consulting with experts, evaluating, and revising study materials that were approximately five to seven pages long. It should be noted, however, that this was her first attempt at coordinating a team to develop web-based instruction. She estimated that she and her colleagues would spend 65 hours the next time they developed similar materials. The reduction in the number of hours was attributed to their learning curve. The benefits were measured by the students' grades and an attitude survey. There was no significant difference in grades between students who received web-based supplemental materials and those who did not. According to a survey, students liked the web-based material because of its convenience

and ability to let them learn at their own pace. However, the students felt negatively toward the lack of interactivity, the unreliable quality of the information from the Internet, and the unreliable Internet connection.

The effectiveness of web-based training varies according to instructional design elements. Paul (2001) conducted a meta-analysis on the effectiveness and the factors that influence the effectiveness of web-based training. He reviewed 382 sources of literature and included 35 sources with 95 data points in his calculation of the effect size statistic ( $\underline{d}$ ). He found the following results. The overall effectiveness of web-based training was positive ( $\underline{d} = 0.23$ ). Web-based training accompanied by feedback ( $\underline{d} = 0.25$ ) was more effective than without ( $\underline{d} = 0.20$ ), with immediate feedback ( $\underline{d} = 0.28$ ) better than delayed feedback ( $\underline{d} = 0.09$ ). Web-based instruction followed by practice was more effective ( $\underline{d} = 0.30$ ) than such instruction without ( $\underline{d} = 0.08$ ). Active learning had higher effectiveness ( $\underline{d} = 0.28$ ) than passive learning ( $\underline{d} = 0.22$ ). Massed practice or a continuous single session was more effective ( $\underline{d} = 0.34$ ) than distributed practice or multiple sessions ( $\underline{d} = 0.30$ ). Instruction with no self-pacing ( $\underline{d} = 0.26$ ) was better than that with self-pacing ( $\underline{d} = 0.21$ ). Learning criteria (i.e., how much students have learned from the course?) were significantly associated with a positive effect size ( $\underline{d} = 0.24$ ) over reaction criteria (i.e., how much students like the course?) ( $\underline{d} = 0.17$ ). The effectiveness of web-based training was positively related to the number of instructional design variables incorporated and the number of media implemented in the training.

Brown (2000) suggested that web-based students need to be adequately equipped with metacognitive skills (e.g., problem-solving and critical-thinking skills) to navigate

through the wealth of knowledge available online in order to ensure their success.

According to Brown, instructors should facilitate students in constructing meanings from the online resources. Also, web-based instruction needs to match learners' cognitive styles.

Rodriguez (2002) studied matching cognitive styles with web-based instruction. The sensing-intuitive dimension of cognitive style was selected and measured by twenty selected questions of the Kiersey Temperament Sorter (KTS). It is an abbreviated version of the Myers Briggs Type Indicator (MBTI). The only evidence of validity was the following. Based on samples of university students, correlation comparisons between MBTI and KTS ranged from 0.68 to 0.86. The numbers showed that both MBTI and KTS measured the same constructs. No evidence of reliability was reported. In Rodriguez's study two groups of undergraduate students in a marketing class ( $N = 162$ ) who scored high on either the sensing or the intuitive dimension were selected to participate for extra credit. The participants were asked to take a pre-test, review the same web-based materials presented in two designs (hypertext and linear text), and take a post-test. The pre and post-tests contained the same seven multiple-choice questions. Post-test scores were not significantly affected by the sensing-intuitive dimension of cognitive style, instructional design, or their interaction effect.

Ruksam (2000) investigated the effects of learning styles on 199 students in a web-based class in Thailand using Kolb's Learning Style Inventory (LSI) that was translated in Thai. No evidence of validity or reliability was reported. Pre and post-tests were used. Two types of web-based instruction were designed, one providing interaction

with teacher and classmates and another without. Ruksasuk found no significant difference in achievement among students with the four learning styles. Also, she found no significant difference in the students' performance whether they interacted with the teacher and classmates or not. However, there was a significant difference between pre and post tests: all students from all learning styles could learn from the web-based instructions both with and without interaction.

Another study using Kolb's LSI was conducted in the United States. Webb (2001) studied learning style and the effectiveness of web-based instruction. The construct validity of LSI was investigated in two studies and Webb found that LSI measured constructs proposed in Kolbe's experiential learning theory. No numerical statistics were reported, however. Reliability of the LSI was examined by showing internal consistency: Cronbach's alpha of the four basic learning styles and that of the two bi-polar combination scores ranged from 0.73 to 0.88. Also, Webb used an instrument called the Flashlight Current Student Inventory to measure the perceived effectiveness of web-based courses. The inventory has been subjected to content validity, however, without the statistics being reported. Another study addressed predictive validity by identifying distance education activities that significantly correlated with improved students' performance. However, no statistics were reported. There has been little research on the reliability of the inventory. In her study, 73 undergraduate and graduate distance education students in the Northwest participated in this study. Webb found that learning styles did not play a significant role in the

perceived effectiveness of web-based courses. The students perceived web-based courses as effective regardless of their learning styles.

### **Instructional Design**

The revolution of telecommunication technologies has opened up many possibilities in instructional design such as multimedia, hyperlinks, chat rooms, and e-mail (Webb, 2001). Designing a distance learning course has become more complex because of the greater number of choices enabled by such technologies. Instructional design plays a critical role in utilizing available technologies in order to optimize the quality of instruction.

Instructional design can be both a process and a discipline (Seels & Glasgow, 1990). When defined as a process, “it is the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction” (p. 4). When defined as a discipline, “it is that branch of knowledge concerned with research and theory about specifications for instruction and the processes for developing those specifications” (p. 4). Instructional design was started by military during World War II. Military trainers sought orderly processes of instructional design and measurable learning outcomes. Later, many disciplines, including psychology, communications, education, and computer science contributed to the development of the instructional design field.

Instructional design often starts with a model. There are many instructional design models available (Ruksasuk, 2000). Three models are presented here: a generic

model (Seels & Glasgow, 1990), Dick & Carey's model (1996), and Driscoll's model (1998) for web-based training design.

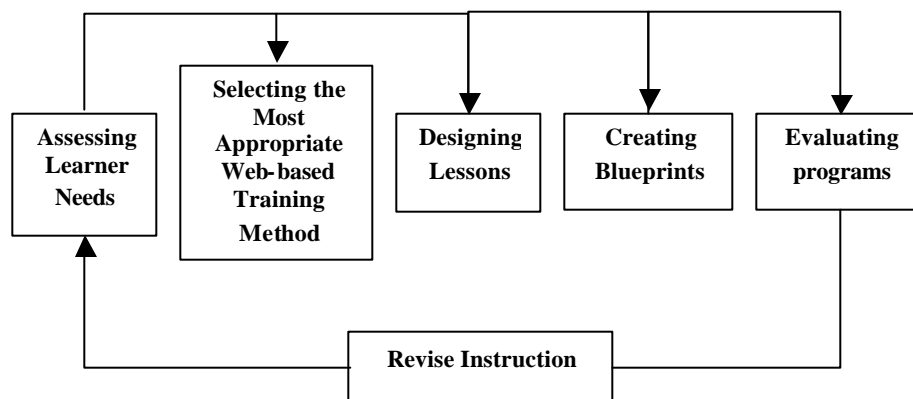
A generic instructional design model is composed of five steps: analysis, design, development, implementation, and evaluation (Ruksasuk, 2000; Seels & Glasgow, 1990). The analysis step is to determine what is to be learned (Ruksasuk, 2000). There are three possible analyses at this step: need analysis to determine whether training is needed, task analysis to explore the topics to be covered, and instructional analysis to identify the detailed content. At the design step, learning objectives and their measurement, teaching strategies, methods, and media are selected. During the development stage, instructional materials are authored, reviewed, produced, and validated. At the implementation step, the actual teaching is accompanied by monitoring. At the end, a summative evaluation is conducted to assess the impact of instruction.

Dick & Carey (1996) proposed an instructional design model called the "Systems Approach Model for Designing Instruction." The model has been widely taught in college level courses for instructional designers (Good, 1997). It consists of the following components (Dick & Carey, 1996):

- Determine the instructional goal
- Analyze the instructional goal
- Analyze the learners and contexts
- Write performance objectives
- Develop assessment instruments
- Develop instructional strategy

- Develop and select instruction
- Design and conduct the formative evaluation of instruction
- Revise instruction
- Conduct summative evaluation

Instructional design models used for traditional classrooms can also be applied to web-based training (Driscoll, 1998). Yet, Driscoll (1998) proposed a slightly different model specifically for web-based training – a looping instructional design process as opposed to a linear one (Figure 1).



**FIGURE 1. Systematic Model for the Design of Web-based Training**

*Source:* Driscoll, 1998, p. 24.

Various instructional design elements can be included in web-based instruction (Webb, 2001). To some, the most exciting ones are the multimedia and hypertext capabilities. Multimedia allows various formats of presentation, including music, voice, graphics, photographs, and videos. The hypertext capability allows instructors to place

hyperlinks on underlined texts, icons, or pictures throughout the instruction. These links can connect to information stored in remote computers. Unlike textbooks, web-based instruction enables nonlinear thinking. Because of such capabilities, web-based instruction can suit the diverse learning styles and needs of students. In addition, interactivity is a useful feature that comes with the Internet. The interaction between teacher and students or among students themselves can be facilitated through e-mails, chat rooms, and web board discussion. Through these channels, students can receive feedback from both teachers and peers.

In Thailand, Wat-Aksorn (2000) studied the pedagogical factors and elements used in designing distance learning courses in English as the first language (EFL) and/or English as the second language (ESL). She used the Delphi technique to collect data from thirteen EFL/ESL distance educators. They agreed that the following statements were important: “Learner-centered, self-directed materials should allow for learner styles and personality” (p. 179). “Materials should be varied to serve all learner preferences and characteristics” (p. 179).

### **Conation**

Historically, Hilgard (1980) traced the modern history of the threefold division of mental activities (i.e., cognition, affection, and conation) back to Germany in the Age of Enlightenment (1700s), the period of rising interests in the individual, consciousness, and the power of the mind. Later, the division was adopted by Scottish, British, and American psychologists in the nineteenth century.



In the United States, the concept of conation fell out of favor because of the arrival of behaviorism in the 1950s (Giles, 1999). However, there has been renewed interest in tripartite theory of the mind since the 1980s (Davis, 1995; Giles, 1999; Snow, 1996; Snow, Corno, & Jackson, 1996).

“Conation” can be defined in different ways. In *Webster’s Third New International Dictionary*, conation is defined as “the conscious drive to perform apparently volitional acts with or without knowledge of the origin of the drive – distinguished from affection and cognition” (Gove et al., 2002, p. 468) and as “an instinctually motivated biological striving that may appear in consciousness as volition or desire or in behavior as action tendencies” (p. 468). In *the American Heritage Dictionary* conation is defined as “the aspect of mental processes or behavior directed toward action or change and including impulse, desire, volition, and striving” (Pickett, 2000, p. 380). Snow, Corno, & Jackson (1996) define conation as “the tendency to take and maintain purposive action or direction toward goals” (p. 266). Atman (1987) defined conation as “vectored energy” because it has both direction and magnitude.

Snow, Corno, & Jackson (1996) have applied the concept of conation as it originated in psychology to education. In the past, only the cognitive domain interested educational researchers. Recently, they have also been interested in conation and affection. Snow, Corno, & Jackson (1996) stated that the goal of studying conation and affection in education as opposed to studying cognition alone is to reach the optimal state of human functioning. Snow, Corno, & Jackson (1996) listed the following priority areas in studying the concepts of conation and affection:

- Taxonomy of conation – What is the structure of conation and how does conation relate to cognition and affection?
- Relations to students' learning and development – How do conation and affection influence and predict the learning and development of students?
- Outcomes of instruction – How can affective and conative domains be treated as outcomes/goals of education as opposed to being treated as predispositions?
- Teachers and administrators – How individual differences in all three domains (i.e., cognitive, affective, and conative) can affect the adaptation of teachers and administrators' perceptions and teaching methods?

Snow, Corno, & Jackson (1996) proposed a taxonomy of individual differences.

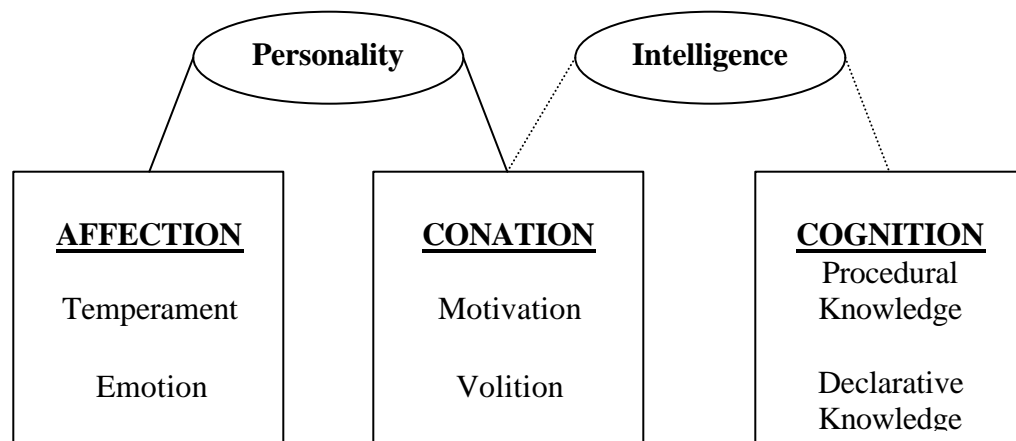
The human mind comprises three major divisions: affection, conation, and cognition (Figure 2). Each division relates to other constructs: affection to temperament and emotion, conation to motivation and volition<sup>3</sup>, and cognition to procedural knowledge and declarative knowledge. This taxonomy also shows the relationship to two other famous constructs: personality and intelligence. Personality overlaps the affection and conation divisions, while intelligence overlaps the conation and cognition divisions.

The three parts of the mind can be applied and interpreted in education as follows (Giles, 1999): Cognition (thinking) involves how and what is learned. Affection (feeling) is the values and beliefs that guide knowledge acquisition. Conation (doing) is the purposeful striving toward a goal of knowledge acquisition. Some scholars (Giles,

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<sup>3</sup> Conscientious, disciplined, self-directed, resourceful, and striving behaviors (Corno, 1993).

1999; Jackson, 2001; Snow, Corno, & Jackson, 1996) argue that smart students fail to reach their potential because they lack proper conative capability.



**FIGURE2. Taxonomy of Individual Difference Constructs**

*Source:* Adapted from Snow, Corno, & Jackson, 1996, p. 247.

Atman (1987) proposed a “taxonomy of conative domain” that shows a process that individuals go through when they exercise their conative capability. It comprises of the following five stages:

- Stage 1: Perception – An individual is open to stimuli.
- Stage 2: Focus – An item, event, or person is selected out from background.
- Stage 3: Engagement – The individual starts to investigate possibilities, ask questions, and develop an action plan.
- Stage 4: Involvement – The individual engages at one of five levels of involvement: minimal, cursory, perfunctory, thorough, and absorbed.

- Stage 5: Transcendence – The individual immerses oneself in the task at hand.

To translate the conative domain into more concrete behaviors, Atman (1987) developed 12 behavioral steps called the “conation cycle of goal accomplishment.” Individuals go through these steps in order to accomplish their goals. Further, these 12 steps are divided into three categories: acting (A), planning (P), and reflecting (R).

1. Recognize the need, problem, challenge or opportunity (P)
2. Set goals (P)
3. Brainstorm alternatives (R)
4. Assess risks (R)
5. Select a strategy (A)
6. Get your act in gear - visualize what would happen when the goals are accomplished (R)
7. Organize (P)
8. Make it happen (A)
9. Push on (A)
10. Wrap it up (A)
11. Ooo & Ah! - evaluate what has been done (R)
12. Purpose/long-range direction (P)

Atman (1987) also developed an instrument to assess goal accomplishment style, called the Goal Orientation Inventory (GOI), based on the conation cycle described above. The instrument consists of 96 self-reported items. The results of the GOI can be

divided into three categories (acting, planning, and reflecting) described above. Acting comprises steps 5, 8, 9, 10 of the conation cycle. Planning behaviors include steps 1, 2, 7, and 12. Reflecting involves steps 3, 4, 6, and 11. According to data collected from 1,116 American adults, these Americans were strongest in acting, not very strong in planning, and least strong in reflecting. To complete conation cycle successfully is to utilize all 12 steps and to make transitions from one category of behaviors to another (i.e., acting, planning, and reflecting) without “getting stuck.”

Atman (1987) stated that conation is an important concept in distance learning. According to Atman, distance learners need to strive independently to accomplish self-selected goals. The learners need not only to set their own goals, but also to finish what they start. Specifically, conation may be applied to three areas of distance education: curriculum design, the delivery system, and student support services. *Curriculum design* must allow students to set their own goals when possible. Students’ intrinsic motivation should be utilized. The *delivery systems* of distance education can make use of functions of existing educational technologies, such as instant feedback and interactivity, to motivate students to strive toward their goals. Since distance learners are independent individuals, student *support services* must be designed to motivate students to search independently for knowledge that suits their needs.

Giles (1999) investigated the predictors of persistence and dropout of students in online computer-conferenced classrooms by using the logistic regression method ( $N = 154$ ). She used variables that had shown significance in the literature and the Goal Orientation Index (GOI) to predict the persistence and dropout of students. The only

reported evidence of validity and reliability of the GOI was reliability coefficients across 12 subcategories that ranged from 0.789 to 0.941. The GOI provides scores in three categories: Acting, Planning, and Reflecting. Then she interviewed 14 selected students for collecting qualitative data. The total number of variables used in her analysis was 25. The analysis showed mixed results. Giles found three variables that could reliably predict persistence of distance learners: whether the student would recommend another online class, whether the student submitted his or her assignments in a timely manner, and an Acting score from the GOI. However, dropout was more difficult to predict. In fact, no statistically significant predictor was found.

Davis (1995) investigated the relationship between conation, goal accomplishment style, and psychological type among distance learners at West Virginia University. She used five instruments to collect data: a self-developed questionnaire for demographic and background data, the Goal Orientation Index (GOI) for conation, the Myers-Briggs Type Indicator® (MBTI®) for psychological type, daily journals for behaviors related to participants' motivation and goal accomplishment, and structured interviews for other types of information such as actual goal setting activities, distractions, course goals, and teachers' influence. Thirty-five participants completed the first four instruments, and 14 participants were interviewed. Davis concluded that the relationship between conation, goal accomplishment style and psychological type was essential in designing and delivering distance education programs. Students with a high conative capacity could manage their own goals, monitor their progress, and overcome distractions and difficulties better than those with low conative capacity. Students with

different psychological types also performed differently. Introverts favored distance learning. Extroverts were skeptical and uncomfortable at first when they had to learn in isolation. However, they grew more comfortable with the medium once they were experienced with it.

### **The Kolbe A Index and Its Applications**

Kolbe (1993) developed an instrument called the Kolbe A Index. It is based on Dewey's (1938) experiential learning theory and Jung's (1946) personality theory. According to Kolbe (1997), human behaviors are the results of the interaction between cognition, affection, and conation. Behavioral patterns can be categorized into four Action Modes: Fact Finder, Follow Thru, Quick Start, and Implementor. The following statements describe an individual who scores high in each Action Mode (Kolbe Corporation, 2002a, p. 3).

- An individual who scores high (seven to ten) in *Fact Finder* “will most likely succeed at tasks which require an individual to: probe, research, formalize, allocate, deliberate, prioritize, define, prove, specify, calculate, inquire, and evaluate.”
- An individual who scores high (seven to ten) in *Follow Thru* “will most likely succeed at tasks which require an individual to: structure, consolidate, translate, prepare, discipline, coordinate, arrange, integrate, schedule, plan, budget, and chart.”
- An individual who scores high (seven to ten) in *Quick Start* “will most likely succeed at tasks which require an individual to: invent, brainstorm, originate, devise, challenge, contrive, risk, play hunches, reform, improvise, promote, and intuit.”
- An individual who scores high (seven to ten) in *Implementor* “will most likely succeed at tasks which require an individual to: form, mold,

demonstrate, craft, shape, put together, build, render, construct, fix, repair, and practice.”

In the business world, the Kolbe A Index has become popular. It has been used in different business applications such as career development, interpersonal relationship management, personnel selection, team management, consulting, and training.

In research, investigators have applied the Kolbe A Index to team selection and team building. Lingard & Berry (2000 & 2002) used the Index in two similar studies determining the factors affecting group performance of engineering students (N = 109 in 2000 and N = 181 in 2002). In the 2000 study, the authors found no significant correlation between groups; project scores and the synergy measure calculated from team members' Kolbe A Indexes. However, there was a significant correlation between the score on the project and the sum of individual team members' exam scores. In 2002, the authors found a significant correlation between group project scores and the “viability” measure, a measure of synergy supplied by Kolbe Corporation analysts.

Similarly, Fitzpatrick (2000) studied the correlation between team project scores and three team variables (viability, profitability, and goal attainment) as calculated from the team members' Kolbe A Index scores. Twenty-four undergraduate students who were split into six teams (n = 4) participated. Team project scores were obtained from two projects. The correlation coefficients between project scores and *viability* were 0.71 for the first project and 0.82 for the second project. The correlation coefficients between project scores and *profitability* were 0.82 for the first project and 0.86 for the second



project. The correlation coefficients between project scores and *goal attainment* were 0.36 for the first project and 0.60 for the second project.

Bailey (2002) conducted a study by comparing a group of undergraduate students in a section (40-45 students) of an engineering design class that was informed about the interpretation of the Kolbe A Index scores and three other sections. According to his survey, the students in the experimental group did not feel that knowledge of the Kolbe A Index improved their class performance.

Harper (1997) used the Kolbe A Index as part of her dissertation research to study the learning strategies of high school students. Data collected from seven teachers and 40 students through various methods were triangulated with the Kolbe A Index to confirm learning strategies. Harper found that the more productive students used the following learning strategies: organizing and transforming information, goal setting and planning, seeking help from peers, and seeking help from adults. The less productive students were weak in these strategies and in Fact Finder or Follow Thru. There were no findings related to Quick Start and Implementor.

The Kolbe Corporation suggested learning styles of individuals who score high (seven to ten) in each of the four Action Modes (see Table 1). These suggestions are intuitively interesting. However, it appears that these suggestions have never been studied, and in particular that they have not been studied in a web-based training context.

**TABLE 1. Suggestions from the Kolbe Corporation**

	<i>Fact Finder</i>	<i>Follow Thru</i>	<i>Quick Start</i>	<i>Implementor</i>
Learning style	Study books on the subject to see how it has been done in the past	Learn the theory or formula	Experiment with radical ideas and innovations	Work with models or prototypes

*Source:* Kolbe Corporation, 1999, pp. 16-17.

### Customer Service

Customer service is an important field in business. Customer service can be defined as follows. “Customer service is a task, other than proactive selling, that involves interactions with customers in person, by telecommunications, or by mail. It is designed, performed, and communicated with two goals in mind: operational efficiency and customer satisfaction” (Lovelock, 1985, p. 268). Another definition is “the actions of the service provider in his/her interaction with a customer that are undertaken to meet the customer’s needs” (Kwan, 1997, p. 5). “Customer service” and “customer orientation” sometimes are used interchangeably.

The “customer” in customer service practice and literature can be interpreted in two ways (Ayres, 2000; Kwan, 1997). Obviously, it refers to individuals who pay for products or services. Also, customers can be other members of an organization. Internal customers play an important role in achieving efficiency within an organization.

However, the concept of an internal customer is not yet popular (Ayres, 2000). Also,

some scholars argue that the concept of internal customers should not exist because it distracts service providers from focusing on the real customers.

“Service” has distinct characteristics with important implications for both research and practice (Chen, 2001). First, service requires customization. Service providers must match available services with personal needs and desires, which leads to higher variability in the quantity and quality of service. Second, customers are involved either directly or indirectly in the service delivery process. Customers are both co-producers and judges of the service. Third, the process of delivering service is emphasized. Customers judge not only the final product of service, but also the process of receiving service.

Fierce competition from both domestic and foreign companies has forced corporations to pay attention to their service in order to attract more customers (Buzzell & Gale, 1987; Kwan, 1997). Other factors include deregulation and litigation. All these factors have compelled a high quality of service to be integrated into corporate policy, which includes personnel. Therefore, it is a challenge for organizations to successfully hire, train, and reward employees who are efficient and service oriented. In research, customer service or service orientation is also receiving increased attention especially in regard to finding the determinants and outcomes of excellent service (Bjarnadottir, 1998; DeGrendel, 1999; Horst, 2001; Kwan, 1997).

It is widely accepted that customers are strategically important to organizations (Holley, 2003). Jenkins (1997) specified five reasons why customers are valued: revenue stream (customers pay for products and services), competitive advantage (customer

loyalty can be a competitive advantage over rivals), market valuation (the stock price of a company increases when customers value the company), learning (customers are sources of knowledge about products and improvements), and change (customers are catalysts for change). For these reasons, executives of corporations view the quality of customer service as important corporate policy. Many firms, however, have failed to deliver excellent services at the micro level (Holley, 2003). Because most service encounters occur at the lowest levels of an organization, front-line employees have an important role in either welcoming or driving away customers (DeGrendel, 1999). The employees are close to customers physically and psychologically. However, these employees who actually serve customers are the lowest paid, are the least skilled and experienced, and have the highest turnover rates in organizations (Lin & Darling, 1997). This leads to a paradox in customer service practice (DeGrendel, 1999; Holley, 2003; Lin & Darling, 1997).

In order to be fully customer-driven, all employees in a company must be service-oriented (Brainard, 2003; Harris, 2000; Zeithaml, Parasuraman, & Berry, 1990). Organization leaders must ensure that their employees can and will behave in a customer-oriented manner (DeGrendel, 1999). Employees who interact with customers need to be empowered with some authority to fulfill customers' requests when needed (Brainard, 2003). The employees also need adequate training.

Stenning, Armstrong, & Barnes (2001) identified and validated skill standards of customer service specialists for the Texas Higher Education Coordination Board. The

standards were used for recruiting and training the specialists. The authors found seven critical work functions as follows.

1. Respond to customer concerns
2. Troubleshoot and diagnose technical problems
3. Coordinate customer support team responsibilities
4. Resolve customer issues
5. Document customer support solutions
6. Evaluate and improve customer service processes
7. Participate in training/self development

The customer service concept is applicable not only in business, but also in education. Brainard (2003) applied a concept of customer service to higher education. She stated that faculty members seldom perceived that they are service providers and that they should deliver excellent service. In her study, Brainard interviewed 21 faculty members from four Christian universities about components of quality service in higher education excluding instructional activities. She found a consensus for the following three components: making themselves accessible to students, interacting with students through formal and informal roles, and cultivating relationships with students. The idea of customer service in higher education is becoming more important with frequent increases in tuition. Because tuition is a large expense for many families, their expectations for the quality of the education are high. Some educational institutions have adopted Total Quality Management (TQM) -- a practice that is grounded on the

principles of customer satisfaction, continuous improvement, empowerment, and teamwork -- in order to live up to the expectations of students and their families.

### **Chapter Summary**

In Thailand, the Internet has been a catalyst of developments in many areas including government, commerce, industry, society, and education. Because of its accessibility, distance education has grown rapidly in Thailand and other parts of the world. This growth is due in part to the fact that instruction delivered via the Internet has advantages such as multimedia and hypertext features over the traditional classroom. These features can be built into web-based instruction and customized to fit individual differences. Among the differences that can be taken into account in designing web-based training to achieve optimal learning outcomes are differences in conation. Conation can be measured by the Kolbe A Index, which was developed by the Kolbe Corporation. The Index has been used in various business applications.

Customer service is an important area in business. However, many firms failed to deliver excellent service as promised. Further, excellence customer service may be important in higher education as well.

## CHAPTER III

### METHODOLOGY

This chapter presents the methodology of this research. The chapter is organized into five sections: Population, Unit of Statistical Analysis, Web-based Simulation of Training on Customer Service Excellence, Instrumentation, Procedures, and Design and Statistics. A chapter summary also is provided.

#### **Population**

The population was the 1998 graduates of the international program in economics at Thammasat University, Thailand. The program lasts four years and is taught entirely in English; the graduates are fluent in English. The total number of graduates was 61. This population was chosen because its characteristics are consistent with the Thai Internet user profile studied in 1999 and 2000 by the National Information Technology Committee: “young, urban, educated, English-literate, and relatively well-to-do” (Suriyasarn, 2003, p. 194). All 61 participants were invited to participate in this study. Sixty graduates did participate. Thus, the response rate was 98 percent.

#### **Unit of Statistical Analysis**

The unit of statistical analysis is defined as “the sampling unit replicated within a research study” (Gall, Gall, & Borg, 2003). This study attempted to investigate how

individuals act in isolation when they go through a web-based simulation. Therefore, the unit of statistical analysis in this case was the individual.

### **Web-based Simulation of Training on Customer Service Excellence**

I designed a web-based simulation of training on customer service excellence. A generic instructional design model with five steps was followed: analysis, design, development, implementation, and evaluation (Seels & Glasgow, 2000). A task *analysis* for this study was taken from an analysis of the Texas Customer Service Specialist Skill Standards (Stenning, Armstrong, & Barnes, 2001). Learning objectives were then specified in the *design* step. At the *development* stage, the content and test questions were authored and validated. The simulation was *implemented* on the Internet and monitored daily. The *evaluation* stage of the simulation is presented in Chapter IV.

I selected four learning objectives for this simulation, based the Texas Customer Service Specialist Skill Standards (Stenning, Armstrong, & Barnes, 2001). They are as follows.

At the end of the training, participants will be able to ...

Learning Objective 1: articulate the reasons why customer service  
is important

Learning Objective 2: articulate how customers' expectations are  
formed

Learning Objective 3: articulate effective practices of how to  
deliver customer service



Learning Objective 4: articulate courses of effective action when  
dealing with an upset customer

I developed four learning modules that match the learning styles of the four Action Modes presented in Table 1. Each module had the same learning objectives described above. Module FF reflected the learning style of the Fact Finder, Module FT reflected that of the Follow Thru, Module QS reflected that of the Quick Start, and Module IM reflected that of the Implementor (see Appendix B).

The simulation was given to three experts on applications of the Kolbe A Index and instructional design to check whether the modules reflected the suggestions in Table 1. All experts agreed that it did.

### **Instrumentation**

Two instruments were used in this study: the Kolbe A Index and evaluation of learners' attitudes and achievements. Details of these instruments are as follows.

#### *The Kolbe A Index*

The Kolbe A Index measures the conation of individuals (Thomas, 1998). The Index consists of 36 forced-choice questions. Each question requires a respondent to select how he or she would be most and least likely to behave in a given scenario. The Index takes approximately 15-20 minutes to complete. The Index is accessible online at <http://www.kolbe.com>. For this study, copies of the Index were purchased and free use of the software that manages participants' scores for six months was received from Kolbe Corporation (see Appendix A).

The scores on the Kolbe A Index can be categorized into four Action Modes: Fact Finder (FF), Follow Thru (FT), Quick Start (QS), and Implementor (IM). In each Action Mode, a score ranging from one to ten is given. Therefore, a respondent receives four scores (FF, FT, QS, and IM scores) after completing the Index.

When an individual scores high (seven to ten) in an Action Mode, he or she will “initiate” certain actions. These actions are described as follows (Kolbe Corporation, 2002a, p. 3).

- An initiating Fact Finder will most likely succeed at tasks which require an individual to: *probe, research, formalize, allocate, deliberate, prioritize, define, prove, specify, calculate, inquire, and evaluate.*
- An initiating Follow Thru will most likely succeed at tasks which require an individual to: *structure, consolidate, translate, prepare, discipline, coordinate, arrange, integrate, schedule, plan, budget, and chart.*
- An initiating Quick Start will most likely succeed at tasks which require an individual to: *invent, brainstorm, originate, devise, challenge, contrive, risk, play hunches, reform, improvise, promote, and intuit.*
- An initiating Implementor will most likely succeed at tasks which require an individual to: *form, mold, demonstrate, craft, shape, put together, build, render, construct, fix, repair, and practice.*

The next three subsections present psychometric information about the Kolbe A Index. They address validity, reliability, and group appropriateness.

## **Validity**

The predictive validity of the Kolbe A Index was investigated by an analysis to summarize eight studies on the relationship between participants’ Action Modes and participants’ performance measurements in various fields including sales, aerospace,

construction, and insurance, etc. (Kolbe Corporation, 2002a). The effect size of these studies was 0.67 and the Winer  $Z_c$  was 41.35. The findings are summarized in Table 2.

**TABLE 2. Validity of the Kolbe A Index**

<i>Study</i>	<i>n</i>	<i>r</i>	<i>t</i>	<i>Significance</i>
A	425	.86	34.668	<.01
B	30	.90	10.925	<.01
C	45	.69	6.216	<.01
D	39	.95	18.502	<.01
E	87	.93	23.325	<.01
F	39	.81	8.402	<.01
G	177	.68	12.269	<.01
H	50	.58	4.934	<.01

*Source:* Kolbe Corporation, 2002a, p. 11.

The effect size that is greater than 0.5 is considered significant (Kolbe Corporation, 2002a). Therefore, this instrument was considered valid in predicting performance. However, the effects size of 0.67 means that only 45% ( $0.67^2$ ) of performance variations can be accounted for by the Kolbe A Index. The other 55% of the performance variations can still be attributed to other factors.

### **Reliability**

Reliability has been assessed in terms of test-retest reliability (Kolbe Corporation, 2002a). Data were collected from 70 employees in two major corporations and then collected again eight to 15 months apart. The Pearson's correlation coefficients

between the two periods of time were summarized in Table 3. These correlation coefficients are considered statistically significant. According to data shown above, the measurements of the four Action Modes were consistent over time.

**TABLE 3. Reliability of the Kolbe A Index**

<i>Action Mode</i>	<i>Pearson's correlation coefficients</i>
Fact Finder	p = .69
Follow Thru	p = .71
Quick Start	p = .85
Implementor	p = .77

*Source:* Kolbe Corporation, 2002a, p. 8.

### **Group Appropriateness**

The Kolbe A Index has been successfully used to study a variety of adults aged 18 and over, men and women, whites and non-whites, and Americans and natives of countries other than the United States (Kolbe Corporation, 2002a). The evidence of validity and reliability from the previous studies using the Kolbe A Index was applicable to the population of this study.

### *Evaluation of Learners' Attitudes and Achievements*

Because web-based training is still in a testing stage, most research on the effect of web-based training has focused on the attitudes and achievements of students (Ruksasuk, 2000). Therefore, in this study, web-based simulation learners were evaluated in two categories: attitude and achievement questions. The evaluation of

learners' attitudes and achievements was attached to the web-based simulation training on customer service excellence.

There are five subsections. The first two subsections describes the two categories of questions: Attitude Questions and Achievement Questions. Psychometric information on the evaluation is presented below in the following subsections: Validity, Reliability, and Group Appropriateness.

### **Attitude Questions**

There were two types of attitude questions: Attitude Question #1 and Attitude Question #2. Participants were asked *Attitude Question #1* in order to check their awareness of their general learning style:

If you have to take training to master a skill, which do you like to do first (Choose ONE):

- A. Investigate background information and read the best practices case study?
- B. See a chart providing step-by-step instructions on a recommended approach?
- C. Take the pre-test and then review correct answers for items I need to learn?
- D. See the demo of how to perform and physically practice?

In addition, the following question called *Attitude Question #2* was asked at the end of presentation of each learning module.

Please rate how much you like the presentation of this Module (Choose ONE):

(Least)										(Most)
1	2	3	4	5	6	7	8	9	10	

### **Achievement Questions**

The second category was achievement questions. These multiple-choice knowledge test questions were constructed by directly taking content from the PowerPoint presentations for the four modules. These questions were then validated and pilot tested. See details in the validity and reliability subsections below.

### **Validity**

The purpose of content validity is to find out whether “a test has been constructed adequately” (Kaplan & Saccuzzo, 2001, p. 134). To do so, “determination of content validity evidence is often made by expert judgment” (p. 134). Five experts, each with a Ph.D. in the social sciences, reviewed the attitude and achievement questions and rated the relevance and clarity of the questions based on Likert scales from one to five. To be considered “valid,” questions had to have been a) rated four or five on clarity by at least four out of five experts and b) rated four or five on relevance by at least four out of five experts (see Appendix C). Only valid items were used to evaluate the participants (see Appendix E). Content validity was determined. Achievement questions were about

equally (six or seven items) distributed among learning objectives across the four modules. The distribution of achievement questions is summarized in Table 4.

**TABLE 4. Number of Achievement Questions per Module and Learning Objective**

<i>Module</i>	<i>Learning objective #1</i>	<i>Learning objective #2</i>	<i>Learning objective #3</i>	<i>Learning objective #4</i>	<i>Total</i>
Module FF	6	6	7	6	25
Module FT	6	7	6	6	25
Module QS	6	6	7	6	25
Module IM	6	6	6	7	25

### **Reliability**

To present an indication of the reliability of the attitude and achievement questions, internal consistency was measured from a pilot study. “Internal consistency is an approach in estimating test score reliability in which the individual items of the test are examined” (Gall, Gall, & Borg, 2003, p. 197). There are different methods to calculate the correlation coefficient. Cronbach’s coefficient alpha ( $\alpha$ ), a widely used method for computing test score reliability, was calculated.

The sample for the pilot study consisted of ten Thai students at Texas A&M University. These students were selected on a convenience basis. Cronbach’s alpha for attitude questions was calculated to be 0.1907, and 0.8922 for achievement items. High Cronbach’s alpha indicates high level of internal consistency, thus reliability. The alpha value for the attitude questions should be low because each attitude question measures

different constructs – attitudes toward general preference, Module FF, Module FT, Module QS, and Module IM. Meanwhile, the alpha value of the achievement questions should be high because the questions measure the same construct – achievement (see Appendix D).

### **Group Appropriateness**

The simulation was tested on a group of Thai students at Texas A&M University. The characteristics of this group were congruent with those of population in this study. The evidence of validity and reliability from the pilot study was applicable to this study. This shows group appropriateness for this instrument.

### **Procedures**

The procedures in this study were as follows. First, each potential participant received an e-mail message containing a short description of the study, the web address where the study was located, and his or her assigned username and password. Once a participant logged in to the data collection site, he or she saw the required statements from the Institutional Review Board at Texas A&M University. The participant could choose to participate by clicking the “proceed” button or to decline his or her participation by leaving the website.

Once someone chose to participate, he or she was asked to complete the 36 items of the Kolbe A Index. The participant did not see his or her Index results. However, the results were e-mailed after he or she completed the simulation.



After submitting the Index, the participant was asked Attitude Question #1 (If you have to take training to master a skill, which do you like to do first?). Then the following instructions appeared on the computer screen:

This training simulation will provide you basic knowledge of customer service. The simulation is composed of four modules: I to IV. You will go through each module one at a time. At the end of each module, you will be asked multiple-choice questions to demonstrate your knowledge from each module. You cannot go back to the content once finished viewing. There is no time limit on any section; feel free to work at your own pace.

Module FF was called Module I in the simulation to disguise its relation to Fact Finder. Similarly, Module FT was called Module II; Module QS was called Module III; and Module IM was called Module IV.

After clicking the “proceed” button, the participants saw the PowerPoint presentation of the Module FF study materials. Then, the participants were asked Attitude Question #2 (Please rate how much you like the presentation of this Module). Clicking the “proceed” button brought the participants to the 25 achievement questions for Module FF.

The participants went through the same process for Modules FT, QS, and IM: PowerPoint presentation of the study material, Attitude Question #2, followed by 25 achievement questions. The whole process took approximately two hours. In summary, the process was as follows:

1. Login with username and password.
2. Review the information sheet required by the IRB.
3. Exit or choose to participate.

4. Fill out the 36 questions of the Kolbe A Index.
5. Answer Attitude Question #1 (If you have to take training to master a skill, which do you like to do first?).
6. Review PowerPoint presentation of Module FF study materials.
7. Answer Attitude Question #2 (Please rate how much you like the presentation of this Module.) for Module FF.
8. Answer 25 achievement questions for Module FF.
9. Review PowerPoint presentation of Module FT study materials.
10. Answer Attitude Question #2 for Module FT.
11. Answer the 25 achievement questions for Module FT.
12. Review PowerPoint presentation of Module QS study materials.
13. Answer Attitude Question #2 for Module QS.
14. Answer the 25 achievement questions for Module QS.
15. Review PowerPoint presentation of Module IM study materials.
16. Answer Attitude Question #2 for Module IM.
17. Answer the 25 achievement questions for Module IM.

As an effort to limit possible cheating that would distort achievement scores, the following programming details were added. A login ID and a password were required, so that the participants could not open multiple pages of the study materials when taking the tests. The menu bar that included the “print” command was removed, so that the

participants could not print out presentation material for future reference. Each presentation was programmed to be shown only once; the presentation disappeared after the participants reviewed it. The participants were informed about this feature before they chose to review each presentation.

### **Design and Statistics**

The correlational research using multiple linear regressions was designed. Correlational research is defined as “a type of investigation that seeks to discover the direction and magnitude of the relationship among variables through the use of correlational statistics” (Gall, Gall, & Borg, 2003, p. 622). Multiple regression was used to determine correlation between the Kolbe A Index scores (independent variables) and the attitude and achievement scores (dependent variables). There were ten multiple regression models. The minimum significance level was set at 0.05. The following table summarizes the variables used to answer the research questions.

**TABLE 5. Summary of Research Questions and Their Associated Variables**

<i>Research questions</i>	<i>MR</i> <sup>4</sup> #	<i>Independent variables</i>	<i>Dependent variables</i>
1. To what extent do the four Kolbe A Index Action Modes predict how well learners will like content formatted to match the learning styles of the four Modes?	1	FF, FT, QS, and IM scores	Answer to Attitude Question #1
	2	FF, FT, QS, and IM scores	Answer to Attitude Question #2 for Module FF
	3	FF, FT, QS, and IM scores	Answer to Attitude Question #2 for Module FT
	4	FF, FT, QS, and IM scores	Answer to Attitude Question #2 for Module QS
	5	FF, FT, QS, and IM scores	Answer to Attitude Question #2 for Module IM
2. To what extent do the four Kolbe A Index Action Modes predict how well learners will remember content formatted to match the learning styles of the four Modes?	6	FF, FT, QS, and IM scores	Achievement score for Module FF (total of 25)
	7	FF, FT, QS, and IM scores	Achievement score for Module FT (total of 25)
	8	FF, FT, QS, and IM scores	Achievement score for Module QS (total of 25)
	9	FF, FT, QS, and IM scores	Achievement score for Module IM (total of 25)
3. To what extent do the four Kolbe A Index Action Modes predict how well the learners will remember the content regardless of the format?	10	FF, FT, QS, and IM scores	Total achievement score (total of 100)

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<sup>4</sup> Multiple regression equation.

### **Chapter Summary**

In this chapter, the methodology of this study was presented. I designed a web-based simulation of training on customer service excellence. The simulation's content was validated by three experts. Two instruments were used: the Kolbe A Index and evaluation of learners' attitudes and achievements. The first instrument is composed of 36 questions. The second is composed of attitude and achievement questions. The validity of the second instrument was examined by five experts. A pilot study was conducted to determine the internal consistency of the second instrument. Sixty graduates from an international program in Thailand participated in the study. The design was correlational using multiple regressions.

## CHAPTER IV

### RESULTS OF THE STUDY

This chapter presents the findings of the study. Before the statistical analysis is presented, all of the variables with their short descriptions are summarized in order to familiarize readers with the variables in the data analysis. Descriptive statistics including frequency, mean, median, and standard deviation of these variables are also shown. The results of multiple linear regression analyses are presented. The research questions are answered. A summary of this chapter is presented at the end.

#### **Variables**

There were 14 variables in this study. Four variables (FF, FT, QS, and IM) were independent variables obtained from the Kolbe A Index. The other ten variables were dependent variables collected from evaluation of learners' attitudes and achievements. The variables and their descriptions are summarized in Table 6.

**TABLE 6. Variables and Their Descriptions**

<i>Variables</i>	<i>Descriptions</i>	<i>Level of measurement</i>
FF	Fact Finder score from the Kolbe A Index	Interval, 1-10
FT	Follow Thru score from the Kolbe A Index	Interval, 1-10
QS	Quick Start score from the Kolbe A Index	Interval, 1-10
IM	Implementor score from the Kolbe A Index	Interval, 1-10
CHOOSE	<p>If a participant has to choose to a master skill, he/she would choose the following first.</p> <p>1 = Investigate background information and read the best practices case study</p> <p>2 = See a chart providing step-by-step instructions on a recommended approach</p> <p>3 = Take the pre-test and then review correct answers for items I need to learn</p> <p>4 = See the demo of how to perform and physically practice</p>	Nominal, 1-4
LIKE_FF	How much a participant liked Module FF	Interval, 1-10
LIKE_FT	How much a participant liked Module FT	Interval, 1-10
LIKE_QS	How much a participant liked Module QS	Interval, 1-10
LIKE_IM	How much a participant liked Module IM	Interval, 1-10
ACH_FF	Achievement test score on Module FF	Interval, 0-25
ACH_FT	Achievement test score on Module FT	Interval, 0-25
ACH_QS	Achievement test score on Module QS	Interval, 0-25
ACH_IM	Achievement test score on Module IM	Interval, 0-25
ACH_TOTAL	<p>Total achievement test score</p> <p><math>ACH\_TOTAL = ACH\_FF + ACH\_FT + ACH\_QS + ACH\_IM</math></p>	Interval, 0-100

### Descriptive Statistics

This section presents the descriptive statistics of the variables presented in Table 6. The descriptive statistics are frequency, mean, median, and standard deviation. There are four subheadings: Independent Variables, Answers to Attitude Question #1, Answers to Attitude Question #2, and Achievement Scores.

#### *Independent Variables*

Table 7 shows the frequencies of the four independent variables – FF, FT, QS, and IM. Figure 3 presents Table 7 graphically.

**TABLE 7. Frequencies of FF, FT, QS, IM Scores**

<i>Score</i>	<i>FF</i>	<i>FT</i>	<i>QS</i>	<i>IM</i>
1	0	0	2	7
2	0	0	5	24
3	0	0	20	17
4	4	6	19	6
5	7	13	4	6
6	14	21	8	0
7	23	12	2	0
8	12	7	0	0
9	0	1	0	0
Total	60	60	60	60



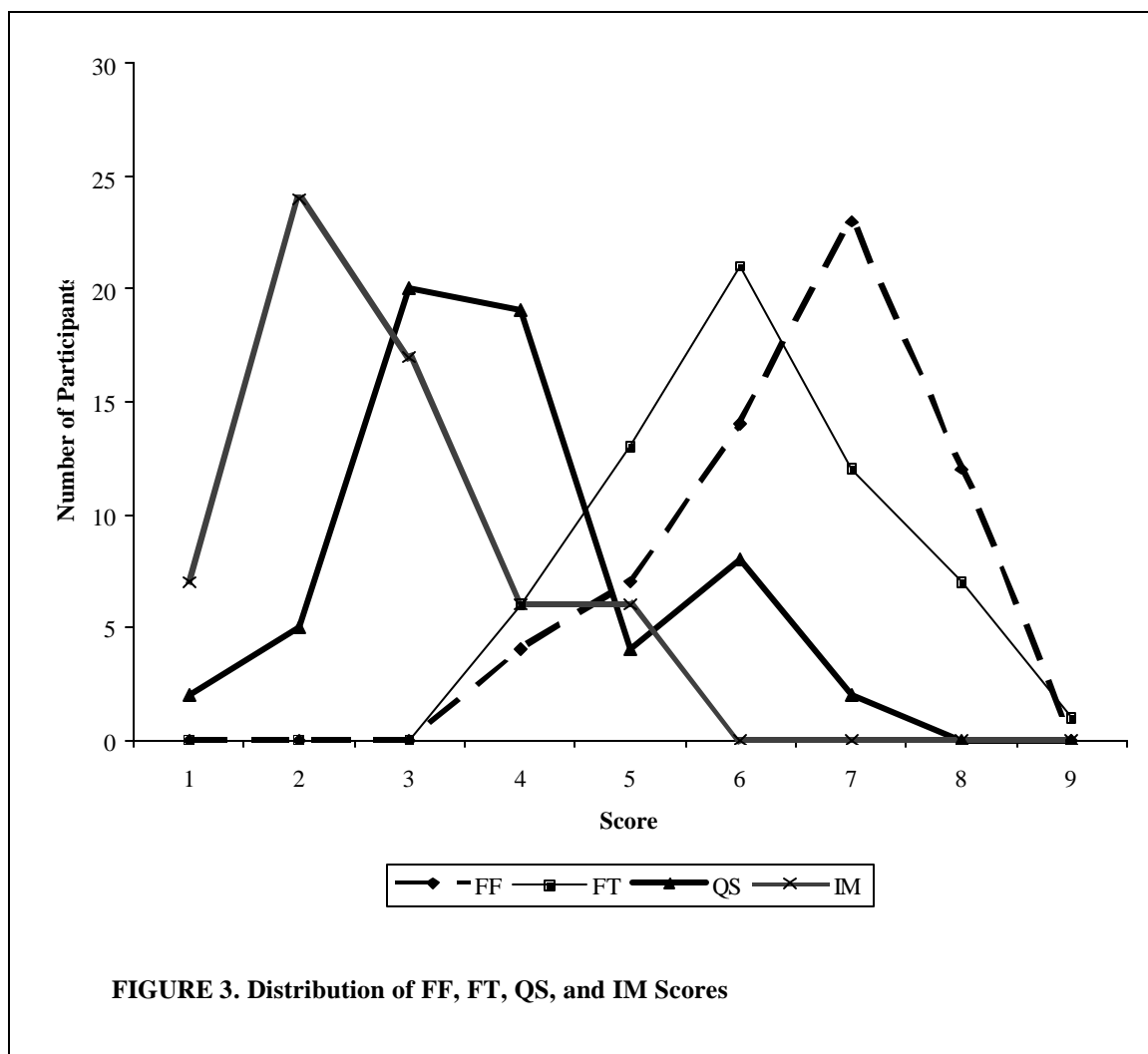


Table 8 presents the minimum, maximum, mean, and standard deviation of the independent variables. The mean values of FF and FT (6.53 and 6.07, respectively) are higher than those of QS and IM (3.83 and 3.67, respectively). In other words, most of the participants scored high in FF and FT and scored low in QS and IM.

**TABLE 8. Descriptive Statistics of FF, FT, QS, IM Scores**

<i>Action Mode</i>		<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
FF	4	8	6.53	1.142	
FT	4	9	6.07	1.205	
QS	1	7	3.83	1.368	
IM	2	6	3.67	1.130	

#### *Answers to Attitude Question #1*

Table 9 summarizes the frequencies of responses to Attitude Question #1.

Nineteen participants preferred to “investigate background information and read the best practices case study” if they had to take training to master a skill. Eighteen participants preferred to “see a chart providing step-by-step instructions on a recommended approach.” Thirteen people preferred to “see the demo of how to perform and physically practice” while ten preferred to “take the pre-test and then review correct answers for items I need to learn.”

**TABLE 9. Frequencies of Answers to Attitude Question #1**

<i>Descriptions</i>	<i>Number of answers</i>	<i>Percentage</i>
“Investigate background information and read the best practices case study”	19	31.67%
“See a chart providing step-by-step instructions on a recommended approach”	18	30.00%
“Take the pre-test and then review correct answers for items I need to learn”	10	16.67%
“See the demo of how to perform and physically practice”	13	21.67%
Total	60	100.00%

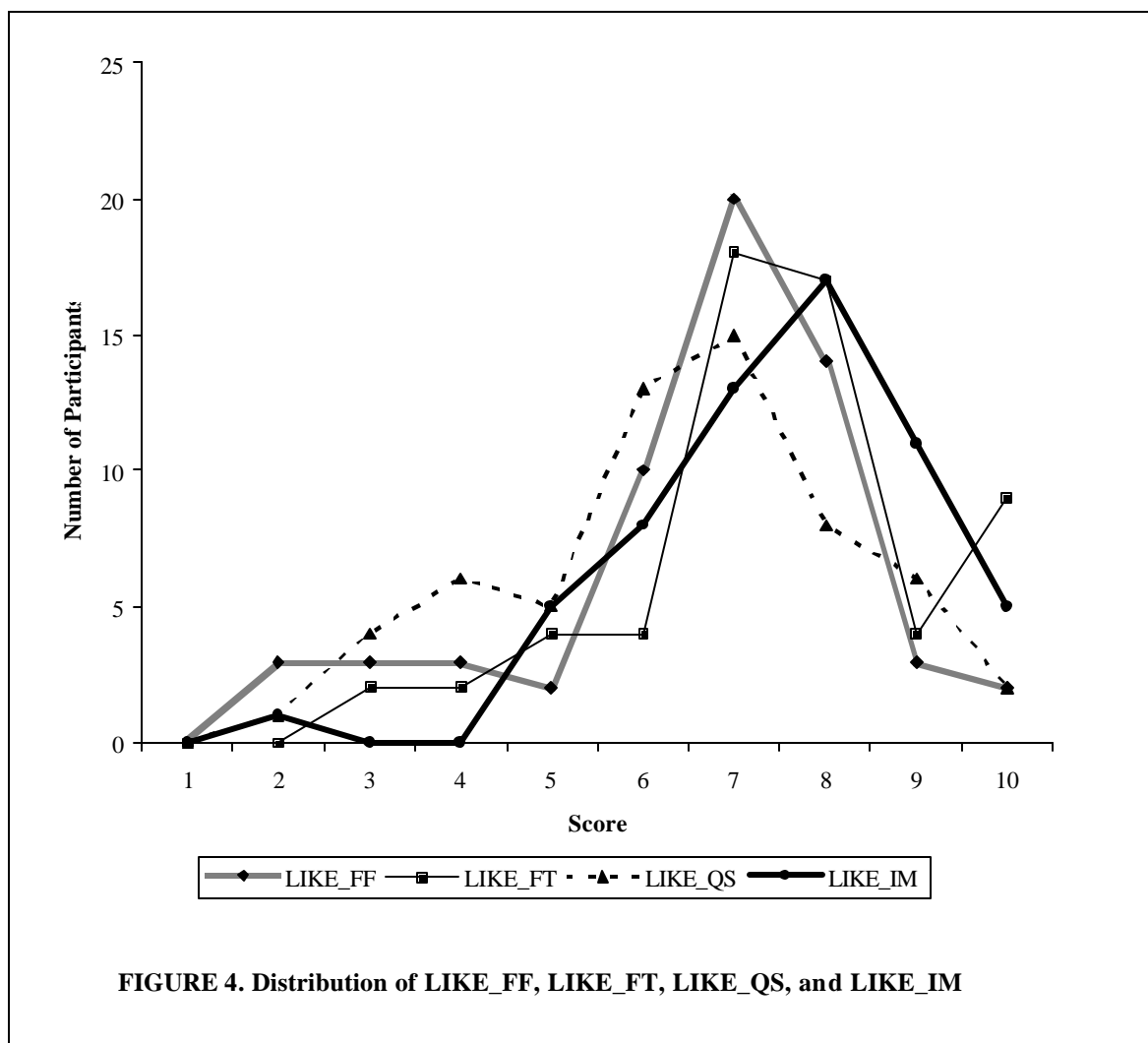
### *Answers to Attitude Question #2*

Table 10 shows the frequencies of answers to Attitude Question #2 (Please rate how much you like the presentation of this Module) which are LIKE\_FF, LIKE\_FT, LIKE\_QS, and LIKE\_IM.

**TABLE 10. Frequencies of Answers in Attitude Question #2**

<i>Likert scales</i>	<i>LIKE_FF</i>	<i>LIKE_FT</i>	<i>LIKE_QS</i>	<i>LIKE_IM</i>
1	0	0	0	0
2	3	0	1	1
3	3	2	4	0
4	3	2	6	0
5	2	4	5	5
6	10	4	13	8
7	20	18	15	13
8	14	17	8	17
9	3	4	6	11
10	2	9	2	5
Total	60	60	60	60

Figure 4 shows the frequencies graphically. Table 11 summarizes the minimum, maximum, mean, and standard deviation of LIKE\_FF, LIKE\_FT, LIKE\_QS, and LIKE\_IM. In sum, the participants in this study rated all four modules moderately high (six to eight).



**TABLE 11. Descriptive Statistics of Answers to Attitude Question #2**

	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
LIKE_FF	2	10	6.60	1.852
LIKE_FT	3	10	7.43	1.711
LIKE_QS	2	10	6.40	1.861
LIKE_IM	2	10	7.52	1.557

### *Achievement Scores*

Table 12 summarizes the descriptive statistics for the achievement scores.

Variables for the achievement scores were ACH\_FF, ACH\_FT, ACH\_QS, and ACH\_IM. The distributions of all five achievement variables are skewed to the left. The achievement variables other than ACH\_FF have peaked or leptokurtic distributions. This means that achievement scores tended to cluster in the high end of their distributions. Most of the participants scored high on the achievement questions.

**TABLE 12. Descriptive Statistics of Achievement Scores**

	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis		
					Statistic	Standard error	Statistic	Standard error
ACH_FF	9	24	19.35	4.149	-.902	.309	-.110	.608
ACH_FT	10	25	20.08	3.911	-1.102	.309	.529	.608
ACH_QS	7	23	17.28	3.849	-1.054	.309	.821	.608
ACH_IM	8	24	19.13	3.491	-.907	.309	1.144	.608
ACH_TOTAL	37	93	75.85	12.392	-.994	.309	.588	.608

### **Multiple Regression Analyses**

Multiple regression has been defined as “a statistical procedure for determining the magnitude of the relationship between a criterion variable and a combination of two

or more predictor variables” (Gall, Gall, & Borg, 2003). The multiple regression equations in this study are summarized as follow.

$$\text{CHOOSE} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(1)$$

$$\text{LIKE\_FF} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(2)$$

$$\text{LIKE\_FT} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(3)$$

$$\text{LIKE\_QS} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(4)$$

$$\text{LIKE\_IM} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(5)$$

$$\text{ACH\_FF} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(6)$$

$$\text{ACH\_FT} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(7)$$

$$\text{ACH\_QS} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(8)$$

$$\text{ACH\_IM} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(9)$$

$$\text{ACH\_TOTAL} = \beta_0 + \beta_1\text{FF} + \beta_2\text{FT} + \beta_3\text{QS} + \beta_4\text{IM} + e \dots\dots(10)$$

SPSS was used to perform all statistical analyses. An attempt to perform the stepwise<sup>5</sup> method was first undertaken. Stepwise is the most frequently used regression method (George & Mallery, 2001). However, none of the variable had sufficient predictive power to enter the stepwise method. Therefore, no output was produced for these models. The entry value was changed from 0.05 to 0.1 and the removal value was changed from 0.1 to 0.2. The errors still existed in some models. The same situation

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<sup>5</sup> “This procedure enters variables into the discriminant equation, one at a time, based on a designated criterion for inclusion ( $F = 1.00$  is default) but will drop variables from the equation if the inclusion requirement drops below the designated level when other variables have been entered” (George and Mallery, 2001, p. 361).

occurred when the forward<sup>6</sup> method was used. The backward<sup>7</sup> method was employed and data was obtained in all models. Therefore, all multiple regression analyses were performed using the backward method. Both stepwise and backward methods may yield the same results. “When there are only a few independent variables in a dataset, it is not uncommon to arrive at the same model irrespective to whether the backward or stepwise procedure is used” (Dowdy & Wearden, 1991, p. 496).

Table 13 summarizes the results of the multiple linear regressions. The criterion for selecting the best model was the highest multiple coefficient of determination<sup>8</sup> or  $R^2$ . The effect size ( $\eta^2$ )<sup>9</sup> and power<sup>10</sup> are also included in Table 13. The conventions for magnitude of effect size were as follows:  $\eta^2 = 0.01$  is a small effect size,  $\eta^2 = 0.09$  is a medium effect size, and  $\eta^2 = 0.25$  is a large effect size (Cohen, 1988). The convention for power is 0.80 (Cohen & Cohen, 1983; Murphy & Myers, 1998). However, 0.70 is also acceptable (Dowdy & Wearden, 1991). The consensus is that it should exceed 0.50.

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<sup>6</sup> “This method will enter variables one at a time, based on the designated significance value to enter. The process ceases when there are no additional variables that explain a significant portion of additional variance” (George and Mallery, 2001, p. 185).

<sup>7</sup> “This method enters all independent variables at one time and then removes variables one at a time based on a preset significance value to remove. The default value to remove a variable is  $p = .10$ . Where there are no more variables that meet the requirement for removal, the process ceases” (George and Mallery, 2001, p. 185).

<sup>8</sup> “The proportion of variance in the dependent (or criterion) variable that is explained by the combined influence of two or more independent (or predictor) variables” (George and Mallery, 2001, p. 355).

<sup>9</sup> “The proportion of the variance in the dependent variable accounted for by an independent variable” (George and Mallery, 2001, p. 355).

<sup>10</sup> The probability of rejecting the null hypothesis (Cohen and Cohen, 1983).



**TABLE 13. Results of Multiple Linear Regressions**

<i>Dependent variables</i>	<i>Model #</i>	<i>Predictors in the best model</i>	<i>R<sup>2</sup></i>	<i>Effect size</i>	<i>Observed power</i>
				<i>η<sup>2</sup></i> (each predictor's η <sup>2</sup> )	(each predictor's power)
CHOOSE	(1)	FF, FT, QS	0.200	0.200 (0.046, 0.062, 0.088)	0.872 (0.364, 0.474, 0.625)
LIKE_FF	(2)	none significant	-	-	-
LIKE_FT	(3)	FT, QS	0.130	0.130 (0.001, 0.103)	0.723 (0.055, 0.709)
LIKE_QS	(4)	FF	0.083	0.083	0.617
LIKE_IM	(5)	FF, FT, IM	0.151	0.151 (0.025, 0.143, 0.033)	0.725 (0.221, 0.853, 0.277)
ACH_FF	(6)	none significant	-	-	-
ACH_FT	(7)	none significant	-	-	-
ACH_QS	(8)	none significant	-	-	-
ACH_IM	(9)	FT	0.078	0.078	0.0588
ACH_TOTAL	(10)	none significant	-	-	-

To be considered “predictive” models in this study, the following were expected:

For models (1) and (10), all independent variables were expected to be included in the models. For models (2) and (6), FF was expected to show up in the best models. For models (3) and (7), only FT was expected to be in the best model with a positive sign. For models (4) and (8), QS was expected to be the predictor in the best models. For models (5) and (9), only IM was expected to remain or to have the strongest effect size

in the best models. As shown in Table 13, although some models turned out to be significant, none of the models turned out to be predictive based on described criteria.

### **Discussion**

In this study, there were some correlations among variables. First, there were correlations among independent variables: FF, FT, QS, and IM<sup>11</sup>. Second, responses to Attitude Question #2 (LIKE\_FF, LIKE\_FT, LIKE\_QS, and LIKE\_IM) were correlated. Last, achievement scores (ACH\_FF, ACH\_FT, ACH\_QS, and ACH\_IM) were also correlated. These correlations are discussed below.

If there are correlations among independent variables, the problem of multicollinearity exists (Cohen & Cohen, 1983; Pedhazur, 1982). However, there is no consensus about this term. Some scholars use this term when any correlation among independent variables exists. Some use it only when there are high correlations among such variables. But again, there is no consensus what “high” means. Some scholars compromise by using the degree of multicollinearity. In this study, I refer to any correlation among predictors as multicollinearity.

Multicollinearity is undesirable because it leads to an imprecise estimation of the regression coefficients (Cohen & Cohen, 1983; Pedhazur, 1982). Multicollinearity results in higher standard errors of regression coefficients. And large standard errors of regression coefficients may lead to reversal of signs of regression coefficients and low

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<sup>11</sup> See descriptions of variables in section Variables of Chapter IV.

power or wide confidence intervals of estimates of regression coefficients (Pedhazur, 1982).

Multicollinearity may come from the way Action Modes scores are allocated. Fitzpatrick, Askin, & Goldberg (2001) wrote “An individual’s instinctive energy is assumed to sum to between eighteen and twenty-two. These units are then allocated among the four action modes, resulting in a score of one to ten in each mode” (p. 9). The sum of Action Mode scores ranged from 19 to 21 in this dissertation. The scores ranged from 19 to 22 in Fitzpatrick, Askin and Goldberg’s (2001) study. If these statements are true, negative correlations among Action Modes scores are likely because high scores in one Action Mode would force low scores in other Modes in order to keep the sum of scores constant. Thus, when these scores are used as independent variables in multiple regression analysis, multicollinearity is likely to exist. As shown in Table 14, all correlation coefficients have negative signs.

**TABLE 14. Correlations among Independent Variables**

Action Mode	Pearson's				
	correlation	FF	FT	QS	IM
	coefficient / Significance				
FF	$r_p$	1			
	Significance	.			
FT	$r_p$	-.002	1		
	Significance	.990	.		
QS	$r_p$	-.344**	-.548**	1	
	Significance	.007	.001	.	
IM	$r_p$	-.556**	-.232	-.179	1
	Significance	.001	.074	.171	.

\*\* Correlation is significant at the 0.01 level (2-tailed).

Multicollinearity is not desirable. It may cause no ability of the Kolbe A Index to predict learners' attitudes and achievements in this study.

Alternatively, a correlation matrix may be used to answer the research questions, although multiple regression analysis is better because it includes all predictors and a dependent variable while correlation analysis includes only two variables. There is no significant correlation between FF and LIKE\_FF, FF and ACH\_FF, FT and LIKE\_FT, FT and ACH\_FT, QS and LIKE\_QS, QS and ACH\_QS, IM and LIKE\_IM, and IM and ACH\_IM (see Table 15). The conclusion of no ability to predict learners' attitudes and achievements remains the same under correlation analysis.

**TABLE 15. Correlations among Independent Variables and Selected Dependent Variables**

Dependent variables	Pearson's				
	correlation	FF	FT	QS	IM
	coefficient / Significance				
LIKE_FF	$r_p$	.119			
	Significance	.367			
LIKE_FT	$r_p$		.175		
	Significance		.182		
LIKE_QS	$r_p$			-.200	
	Significance			.126	
LIKE_IM	$r_p$				.022
	Significance				.865
ACH_FF	$r_p$	.114			
	Significance	.387			
ACH_FT	$r_p$		.139		
	Significance		.290		
ACH_QS	$r_p$			.077	
	Significance			.560	
ACH_IM	$r_p$				-.044
	Significance				.736

The answers in Attitude Question #2 were also correlated (see Table 16). The participants rated all modules moderately high. The high ratings may reflect cultural factors. The participants knew me and knew that I designed the learning modules. Thais are taught to be polite to each other. Politeness sometimes is more important than

honesty. Thus, the participants may not be honest about how they like the modules. It might also be possible, however, that the participants did not detect any difference in the modules.

**TABLE 16. Correlations among Answers to Attitude Question #2**

		LIKE_FF	LIKE_FT	LIKE_QS	LIKE_IM
LIKE_FF	$r_p$	1			
	Significance	.			
LIKE_FT	$r_p$	.649**	1		
	Significance	.001	.		
LIKE_QS	$r_p$	.450**	.381**	1	
	Significance	.001	.003	.	
LIKE_IM	$r_p$	.285*	.627**	.220	1
	Significance	.028	.001	.091	.

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The achievement scores from four learning modules (i.e., Modules FF, FT, QS, and IM) are also correlated (Table 17). The participants tended to score high in all modules.

**TABLE 17. Correlations among Achievement Scores**

		ACH_FF	ACH_FT	ACH_QS	ACH_IM
ACH_FF	$r_p$	1			
	Significance	.			
ACH_FT	$r_p$	.549**	1		
	Significance	.001	.		
ACH_QS	$r_p$	.489**	.577**	1	
	Significance	.001	.001	.	
ACH_IM	$r_p$	.539**	.571**	.447**	1
	Significance	.001	.001	.001	.

\*\* Correlation is significant at the 0.01 level (2-tailed).

Correlations among dependent variables are not desirable either. Since the dependent variables are correlated, it is redundant to analyze them separately. One reason for the statistically significant correlations among answers in Attitude Question #2 and among the achievement scores might be some participants' lack of breaks between modules. The participants took the four modules at their own pace. Some said they took the training all at one time, some said they took breaks between the modules. In retrospect, taking breaks might be necessary for participants to drain out their memorization and attitudes from one module before moving on to the next. In other words, taking breaks might prevent the carrying over of memorization and attitudes from one module to the next. Taking the training continuously may have made the participants

unable to differentiate the four modules. Thus, requiring breaks between modules may be necessary.

### **Answering the Research Questions**

Based on the results of the multiple regression analyses and specific conditions in this study (i.e., using this web-based simulation, testing 60 individuals in a specific group in Thailand, and performing multiple linear regression with the backward method), the following research questions were answered.

- Research Question #1: To what extent do the four Kolbe A Index Action Modes (Fact Finder, Follow Thru, Quick Start, and Implementor) predict how well learners will like content formatted to match the learning styles of the four Modes?
  - Answer to Research Question #1: According to this study, the four Action Modes of the Kolbe A Index did not predict how well learners liked content formatted to match the learning styles of the four Modes.
- Research Question #2: To what extent do the four Kolbe A Index Action Modes (Fact Finder, Follow Thru, Quick Start, and Implementor) predict how well learners will remember content formatted to match the learning styles of the four Modes?
  - Answer to Research Question #2: According to this study, the four Action Modes of the Kolbe A Index did not predict how well learners



remembered content formatted to match the learning styles of the four Modes.

- Research Question #3: To what extent do the four Kolbe A Index Action Modes (Fact Finder, Follow Thru, Quick Start, and Implementor) predict how well the learners will remember the content regardless of the format?
  - Answer to Research Question #3: According to this study, the four Action Modes of the Kolbe A Index did not predict how well learners remembered content regardless of the format.

### **Chapter Summary**

The 14 variables used in this study were described. Four variables were independent, and ten were dependent. The 14 variables were used to analyze ten multiple linear regression equations. Descriptive statistics of the variables were presented. Most participants scored high on Fact Finder and Follow Thru, scored low on Quick Start and Implementor, rated all modules moderately high, and scored high on the achievement questions in all modules. The results of the multiple linear regression analyses do show some statistically significant models. However, these models were not predictive because they were not expected. Therefore, the answers for the research questions are as follows. Based on this study with specific conditions, the four Action Modes of the Kolbe A Index did not predict how well learners liked content formatted to match the learning styles of the four Modes, how well learners remembered content formatted to

match the learning styles of the four Action Modes, or how well the learners remembered the content regardless of the format.

## CHAPTER V

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter contains a summary and the conclusion of this study. Several recommendations for future research are also presented. A chapter summary appears at the end.

#### **Summary**

Since the business world has changed from mass production to mass customization, the production of goods and services must enable both mass production and individual customization. Training also must be mass customized. The Internet allows mass production of training. The individual customization of training, however, often needs more research to provide insights. This study was an attempt to customize web-based training to fit individual preferences.

The aspect of individual differences, conation, was investigated in this study. It is the striving behaviors of individuals. Conation is distinguished from cognition, which involves thoughts, and from affection, which involves feelings. There is evidence that conation might be useful in educational/learning settings because it contributes to learners' success. Therefore, the concept of conation may be included in several areas of learning, such as curriculum design, instructional design, delivery systems, and student support services. This study incorporated the concept of conation into the instructional design of a web-based simulation of training on customer service excellence.

Four learning modules were designed to match the suggested learning styles. Three experts in applications of the Kolbe A Index and instructional design validated the content of the modules.

Two instruments were used in this study. First, the Kolbe A Index measures conation. The instrument translates raw scores into a set of four Action Modes called Fact Finder, Follow Thru, Quick Start, and Implementor. The Index is used in business for various applications such as personnel selection, team building, and training. The developer of the Index, Kolbe Corporation, suggested learning styles of individuals who score high in each of the four Action Modes. These suggestions may be useful for designing instruction for web-based training. Therefore, this study investigated whether the four Action Modes can predict learning outcomes.

The second instrument was evaluation of learners' attitudes and achievements, which was attached to the web-based simulation of training on customer service excellence. The attitude and achievement questions were validated by five experts, each with a Ph.D. in the social sciences. A pilot study was conducted with a sample size of ten to investigate the reliability of the second instrument.

The research questions were as follow: To what extent do the four Kolbe A Index Action Modes predict 1) how well learners will like content formatted to match the learning styles of the four Modes, 2) how well learners will remember content formatted to match the learning styles of the four Modes, and 3) how well the learners will remember the content regardless of the format?

The study population was 61 graduates from an international program in economics in Thailand. These graduates were fluent in English. Sixty people participated.

Statistical analyses using multiple linear regressions were performed. Ten multiple regression equations were analyzed. The results showed that the four Kolbe A Index Action Modes did not predict how well learners liked content formatted to match the learning styles of the four Modes, how well learners remembered content formatted to match the learning styles of the four Modes, nor how well the learners remembered the content regardless of the format.

### **Conclusion**

Based on the limitations and data analyses for this study, the following conclusion seems warranted: the four Action Modes of the Kolbe A Index (Fact Finder, Follow Thru, Quick Start, and Implementor) did not predict how well learners liked content formatted to match the learning styles of the four Modes, how well learners remembered content formatted to match the learning styles of the four Modes, nor how well learners remembered the content regardless of the format.

### **Recommendations**

The purpose of this study was to investigate the extent to which the Kolbe A Index Action Modes predict learners' attitudes and achievements within a web-based

training context. Based on the literature review and the results of this study, I proposed the following recommendations for future research.

1. The web-based simulation might be repeated with break time between the four modules. The breaks should be long enough for participants to forget their memorization from and attitudes toward one module before proceeding to the next.
2. The same research design may be repeated in other groups. The group that participated in this study may not be a good representation of general web-based learners.
3. To ensure variations of Action Mode scores, the purposeful sampling technique may be used. Equal number of participants who score low, medium, and high in each Action Mode may be selected to participate in a similar study.
4. Other researchers might want to design different web-based simulations. The simulation for this study was designed based solely on my personal interpretation of the suggestions given by the Kolbe Corporation. Different interpretations may yield different results.
5. Other researchers may want to design different evaluations. There are many types of learning outcomes. New attitude and achievement questions may be designed.
6. To elaborate the suggestions given by the Kolbe Corporation, new descriptive research might be needed. There are several ways to approach

this. A survey or the Delphi<sup>12</sup> technique might be used to find out what instructional design elements are preferred by individuals who score high in each of the Action Modes.

7. A factor analysis may be used to explore the relationship between the scores of the four Action Modes.
8. As Snow, Corno, & Jackson (1996) mentioned, cognition, affection, and conation must be studied together. Future research may include all three types of variables. Also, personality and intelligence variables may be included. The combination of these variables might be powerful in predicting learning outcomes.
9. The population or sample size may be increased. Larger sample size can increase statistical power (Cohen & Cohen, 1983; Dowdy & Wearden, 1991).
10. For statistical analysis, canonical correlation may be used. It is defined as “a type of multiple regression analysis involving the use of two or more measured variables to predict a composite index of several criterion variables” (Gall, Gall, & Borg, 2003, p. 619). It was not used in this study because of the small study population. With a larger study population, canonical correlation may be useful.

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<sup>12</sup> A forecasting technique for generating expert opinion on any given subject, that is designed to eliminate the influences of interpersonal feelings and actions as experts interact in the meetings (Miller and Salkind, 2002).

11. Environmental factors such as room temperature and lighting may affect learning outcomes (Desai, Richards, & Eddy, 1999). In order to control such factors that may affect learning outcomes, a laboratory environment may be needed for this type of research.
12. As mentioned in the review of literature regarding web-based training, multimedia and interactivity are some of the most exciting features that come with the Internet (Webb, 2001). Multimedia and interactivity may be added to the design of web-based training being tested.

### **Chapter Summary**

This study was summarized. It was concluded that the Kolbe A Index did not predict learners' attitudes and achievements in this study. Several recommendations for future research were presented.



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## APPENDIX A

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ACCEPTED AND AGREED TO BY LICENSEE:

<u>S. Wongchai</u> Signature	<u>Texas A &amp; M University</u> Company	
<u>Sasicha Wongchai</u> Printed Name	<u>Ph.D. student</u> Title	<u>02/14/03</u> Date
<u>Address: 4100 Oaklawn St., Bryan, TX 77801</u>		

## APPENDIX B

## WEB-BASED SIMULATION ON CUSTOMER SERVICE EXCELLENCE

## Customer Service Excellence

Web-based Training Simulation

### **Instructions**

This training simulation will provide you basic knowledge of customer service. The simulation is composed of four modules: I to IV. You will go through each module at a time. At the end of each module, you will be asked multiple-choice questions to demonstrate your knowledge from each module. You cannot go back to the content once finished viewing. There is no time limit on any section; feel free to work at your own pace.

## **Module I**

### **Why customer service is important?**

Customer service was empirically documented to contribute to profitability of organizations. The large database from the Profit Impact of Market Strategy (PIMS) proved the following results.

Source: Buzzell & Gale, 1987



In the long run, the most important single factor of business performance was the quality of products and services relative to its competitors. The quality affected performance in two ways.

Source: Buzzell & Gale, 1987

5

First, superior quality allowed premium prices. PIMS businesses that ranked in the top third on relative quality set their selling prices 5-6% higher than those in the bottom third.

Source: Buzzell & Gale, 1987

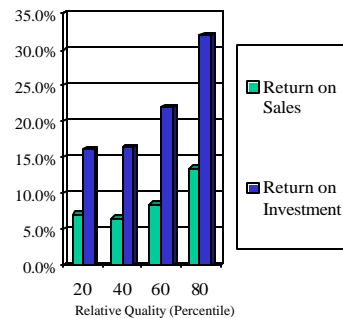
6

Second, in the long run, the superior quality led to business growth. Although businesses incurred costs in improving quality in the short run, the costs were offset by economy of scale in the long run. PIMS businesses with superior quality had equal costs to their competitors while enjoying superior profit margins.

Source: Buzzell & Gale, 1987

7

This exhibit shows, from the PIMS database, the positive relationship between quality and the return on sales and the return on investment.



Source: Adapted from Buzzell & Gale, 1987, p. 107

8

### Customer's Expectations

Zeithaml, Parasuraman, and Berry (1990) conducted an exploratory customer study to find out how customers evaluated the quality of a service. The study comprised of 12 customer focus-group interviews (geographically dispersed throughout the United States), three in each of four service sectors: retail banking, credit cards, securities brokerage, and product repair and maintenance. The findings were as follow.

9

The definition of service quality was the extent of discrepancy between customers' expectations or desires and their perceptions. Customers expect good service to meet or exceed their expectations.

10

Four factors influencing customers' expectations were found from the interviews. These factors appeared in all the focus groups.

- word-of-mouth communications
- personal needs of customers
- past experiences
- communications from service providers

11

### How to deliver customer service

Mark Sanborn (1998), a consultant in the customer service area, identified the ten best practices that exceptional service providers have in common. Those service providers do a lot of these things right.

12

- *Eliminate irritants*
  - Conduct a search for customer irritants and destroy them.

13

- *Perform as promised*
  - Follow-through is a must in customer service. Excellent service providers always deliver what they promise.

14

- *Manage the customer's experience*
  - Little touches and comments make customers remember doing business with you as personal and enjoyable.

15

- *Make customers insiders*
  - Customers want to be treated like insiders, not outsiders. Customers are interested in information that affects their services and their lives.

16

- *Create ownership*
  - Create a sense of ownership among frontline service providers by giving them tangible incentives to perform, such as stock options.

17

- *Have fun*
  - Take some risks to have fun. Chances are that the customers will have fun, too.

18

- *Recover remarkably*
  - Although the exceptional service providers are not perfect, they recover remarkably when they make mistakes. Giving up on recovering is costly.

19

- *Involve everyone in improvement*
  - Everyone in your organization can contribute unique ideas. Don't forget to get them involved.

20



- *Make teamwork work*
  - Teamwork works when there is communication, cooperation, and a desire to work toward a common goal.

21

- *Do everything better*
  - Ask everyone in your organization, “How can we do it more, better, faster, or different?” The secret of the best service providers is to do better than what they were previously doing.

22

## What about service breakdown?

Performance Research Associates conducted focus group and telephone interviews during 1991-1992 with over 1,200 customers who experienced service breakdown. These service aspects were reported to create impression on the focus group.

Source: Zemke, 1999

23

### Impressive Service Aspects

### **Percent of focus group members commented**

• Dealt with customer's upset	79.0%
• Apologized	69.1%
• Didn't become defensive, but showed humility and poise	62.9%
• Followed up after the complaint transaction	56.8%
• Showed skill in problem-solving	53.0%
• Was proactive in admitting organization error, didn't try to shift blame	44.4%
• Acted in a fully responsible/empowered fashion on the customer's behalf	40.7%
• Showed good interpersonal skills, particularly listening	40.7%
• Showed empathy for the customer's plight and/or upset	38.3%
• Acted quickly to solve the problem, showed urgency	35.8%
• Created added value for the customer	32.1%

24

## Module II

### Value of Customer Service

The goal of business is to create more value for the customer (Fritz, 1999). The more value created, the more money your business is making. The following formula summarizes how service is an important part of value delivered to customers.

$$\text{Value} = \begin{array}{c} \text{The Utility that Customers Get from} \\ \text{Your Products} \\ + \\ \text{Your Services} \end{array}$$

As you can see, there are only two components for value added to customer's satisfaction. One is the utility of your products. Another is the quality of service you provided. Your service can increase value to customers.

27

Who is responsible for creating the value? The answer is everyone in the organization. Therefore, it is everyone's job to serve customers and to improve the value delivered to them.

28

## Concepts of Customer's Expectations

- Definition of Expectation
  - Expectations can be defined as follows.  
“Expectations are our personal vision of the result that will come from our experience (Harris, 2000, p. 15).”
  - Basically, expectations are formed based on previous experiences.

29

## There are two levels of expectations ...

### Primary Expectations

They are the most basic requirements of your business interaction. For example, the primary expectations of a restaurant are to satisfy the customers' hunger and to provide food without the customers having to cook for themselves.

### Secondary Expectations

They are the enhancement of primary expectations. Examples of secondary expectations for the restaurant business are good service, courtesy, tasty food, and atmosphere.

Source: Harris, 2000

30

## Implications to customer service

- Every customer carries a set of expectations, both primary and secondary.
- Expectations maybe positive or negative.
- Expectations affect how customers behave and evaluate your services.
- Whether you like it or not, you must live up to their expectations!

Source: Harris, 2000

31

## Myth of Customer's Expectations

Many times, service providers assume that they cannot live up to customers' expectations (Harris, 2000). However, in many cases, customer's expectations are not too high and too costly to provide.

The key to meeting or exceeding their expectations is to know what they expect from a particular service.

32

## How do you live up to customers' expectations?

Here is a formula for delivering exceptional customer service (Harris, 2000). Follow these steps and you will exceed customers' expectations.

33

### **Step 1:** Become familiar with your customers.

- Who are your customers?
- What kind of business do they run?
- What do they like?
- What don't they like?

34

**Step 2:** Ask your customers what their expectations are.

- What do they expect from customer service?
- What do they wish you could do for them?
- Customers' expectations are always changing.

35

**Step 3:** Tell your customers what they can expect.

- Do they know what we can do for them?
- Do they expect too much?

36



**Step 4:** Live up to their expectations.

- Deliver what you promise.
- Do not promise what you cannot deliver.
- Try to level your service with the customer's expectation.

37

**Step 5:** Maintain consistency.

- Always deliver consistent service.
- Customers like to know that they will receive the same good service every time.

38

## Sometimes you need to deal with.....challenging customers.....

- Who are Challenging Customers?
  - “Challenging customers are those customers with problems, questions, fears, and personalities that require us to work to achieve true communication (p. 76).”
  - Although some customers may be challenging, the truth is that service providers cannot avoid them. The goal of customer service is to provide satisfaction to all customers.

Source: Harris, 2000

39

- Why are customers challenging?
  - Customers can be challenging for a variety of reasons. For examples, customers do not speak your languages or they are very angry.
  - The bottom line is that customers want to be treated like they are the most important person, and the believe that it is the responsibility of service providers to treat them as such.

Source: Harris, 2000

40

- Characteristics of Challenging Customers

- Language or cultural barriers
- Impatient customers
- Angry customers
- Analytical customers
- Indecisive customers
- Immature customers
- Customers with special needs

Source: Harris, 2000

41

- Two major concepts when dealing with challenging customers

- Respect

Customers, regardless of gender, age, and education, like to be treated with respect. Talking down to customers will make them feel uncomfortable and angry.

- Empathy

Customers like to be acknowledged of their situations. Service providers need to listen and try to solve their problems. Problem solving must accompany empathy when dealing with challenging customers.

Source: Harris, 2000

42

### Six ways to cope with challenging customers

1. Listen
2. Ask questions
3. Show empathy
4. Solve the problem
5. Follow-up
6. End on a positive note

Source: Harris, 2000

43

## Module III

## How much is a customer worth?

### Exercise

Try to estimate a dollar value of a happy customer in the restaurant business per year. This estimate is conservative.

Source: Adapted from Fritz, 1999, p.13.

45

### Direct Value

A. Average revenue per customer per transaction	\$20
B. Number of transactions per year	12
C. Revenue per year (A x B)	\$___
D. Customer lifetime in years	5
E. Customer lifetime value (C x D)	\$___

### Indirect Value

F. Happy customer tells five people on average (E x 5)	\$___
G. Revenue generated from referrals (assuming only 25% actually purchased) (F x 0.25)	\$___

**Total value of one customer (E + G)** \$\_\_\_

46

### Answers

#### Direct Value

A. Average revenue per customer per transaction	\$20
B. Number of transactions per year	12
C. Revenue per year (A x B)	<b>\$240</b>
D. Customer lifetime in years	5
E. Customer lifetime value (C x D)	<b>\$1,200</b>

#### Indirect Value

F. Happy customer tells five people on average (E x 5)	<b>\$6,000</b>
G. Revenue generated from referrals (assuming only 25% actually purchased) (F x 0.25)	<b>\$1,500</b>

**Total value of one customer (E + G)                      \$2,700**

47

## What do customers expect?

### Role Play

- Imagine that you are hired by a consulting firm and your current project is to evaluate the service quality of businesses. What are the standards of service quality that you will rate those businesses on? Give yourself five minutes and write down your answers.

48

### Answers

According to a study by Zeithaml, Parasuraman, and Berry (1990), the following are the dimensions of service quality that customers listed when they were asked to assess the quality of service providers. How many of these did you get right?

49

### Answers

**“Tangibles:** Appearance of physical facilities, equipment, personnel, and communication materials (p.21)”

50

**Answers**

**“Reliability:** Ability to perform the promised service dependably and accurately (p.21)”

51

**Answers**

**“Responsiveness:** Willingness to help customers and provide prompt service (p.21)”

52



**Answers**

“**Competence:** Possession of the required skills and knowledge to perform the service (p. 21)”

53

**Answers**

“**Courtesy:** Politeness, respect, consideration, and friendliness of contact personnel (p. 21)”

54

**Answers**

“**Credibility:** Trustworthiness, believability, honesty of the service provider (p. 22)”

55

**Answers**

“**Security:** Freedom from danger, risk, or doubt (p. 22)”

56

**Answers**

“**Access:** Approachability and ease of contact  
(p. 22)”

57

**Answers**

“**Communication:** Keeping customers  
informed in language they can understand  
and listening to them (p. 22)”

58

### **Answers**

**“Understanding the Customer:** Making the effort to know customers and their needs (p. 22)”

59

## **Customer Service Protocols**

### **Role-Play**

You have just been promoted to be a manager of the customer relations department of XYZ Bank. Congratulations! Tomorrow, you will have to attend the Executive Board meeting. One of the meeting agendas is a proposal on new customer service protocols. Surprise, surprise...you're selected to present the proposal to the Board. Now....What will you put in your proposal? In other words, what should the new protocols look like? Write down your answers and move to the next page.

60

**Answers**

Compare your answers with the following expert suggestions (Wulf, 1999). Proceed to the next pages.

61

- “**Motivation:** Enrolling and mobilizing all employees to participate in a customer-focused work environment (p.229)”
- “**Problem Solving:** When problems are identified, taking immediate and helpful action to solve them in a quick and effective manner (p.229)”

62

- **“Internal Assessments:** Regularly surveying our staff to find out how satisfied they are with the work environment and asking for their suggestions to provide better service (p.229)”
- **“Customer Satisfaction:** Listening carefully to our customers and immediately resolving issues that are causing dissatisfaction (p.229)”

63

- **“Internal Cooperation:** Consistently cooperating with one another throughout the organization to work smarter, do more with less, and reach shared service goals (p.229)”
- **“Proactive Systems:** Consistently making it easy for customers to do business with us by speeding up the purchase process, decreasing response time, and/or making our business a special place to visit (p.229)”

64

- **“Employment Standards:** Employing people at all levels in the organization who feel responsible and empowered to do what needs to be done to service customers and keep them satisfied (p.229)”
- **“Decision Making:** Involving employees at all levels in making decisions about aspects of their work that involve the customer (p.229)”

65

- **“Customer Feedback:** Actively listening to customers and using their input to improve our products and/or services (p.230)”
- **“Service Metrics:** Reporting service metrics so that employees are constantly aware of the importance of customer service and progress in achieving service goals (p.230)”

66

- **“Customer Knowledge:** Understanding and anticipating what customers need, want, or expect, and consistently giving it to them (p.230)”
- **“Feedback Systems:** Operating with a clear feedback system that encourages ongoing customer feedback, listening carefully to their suggestions, and implementing ideas to improve customer service (p.230)”

67

- **“Service-Oriented Culture:** Setting goals, committing resources, modeling behavior, and building a quality service culture to ensure total customer satisfaction (p.230)”
- **“Empowerment:** Training employees at all levels to perform as customer champions capable of using good judgment when quick action is needed to satisfy a customer (p.230)”

68



- **“Trained Front-Line Staff:** Constantly training front-line service personnel in both technical and interpersonal skills, including telephone, face-to-face interaction, and other customer relation skills (p.230)”
- **“Good Reputation:** Developing and maintaining a consistent reputation for credibility, reliability, fair treatment, and honesty by providing reliable delivery and honoring warranties and guarantees (p.230)”

69

## Troubleshooting

### Role-Play

You are now a customer service representative at ABC Department Store. While you're working, a sophisticated lady storms into your office and starts complaining about how her order did not arrive on time. She doesn't stop telling you how upset she is and cursing. How would you handle this customer? Write down your answers and compare your answers to experts on the next page.

70

**Answers**

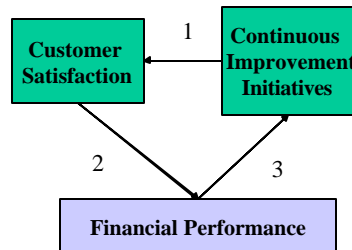
- Listen fully, don't interrupt
- Maintain a respectful tone
- Remove the upset customer from the main customer area
- Let the customer cool off
- Talk about what you can do
- Ignore customer's impoliteness and cursing

Source: Morgan, 1999.

71

**Module IV**

## Model of Business Viability



In business organization, three elements are dynamically linked: customer satisfaction, continuous improvement, and financial performance (Meadow, 1999).

Source: Adapted from Meadow, 1998, p.369.

73

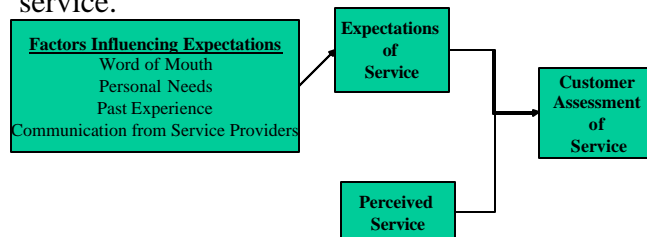
1. The business' continuous improvement initiatives are perceived as customer satisfaction.
2. Customer satisfaction drives financial viability, not the other way around.
3. The organization's financial performance supplies more resources for further improvement initiatives and increase customer satisfaction.

Source: Meadow, 1998.

74

## Expectations of Service Model

The following diagram shows how customers form their expectations and evaluate the quality of service.



Source: Adapted from Zeithaml, Parasuraman, & Berry, 1990, p.23.

75

In other words, customers carry a set of expectations that are influenced by four factors: word of mouth, personal needs, past experience, and communications with service providers. Then customers evaluate the service by comparing their expectations with their perception of the service.

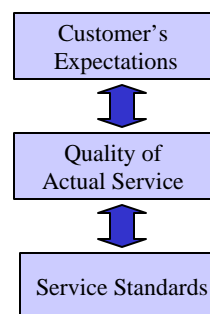
76

The key to superior customer service is to balance customer's expectation and perception and to close the gap between the two (Zeithaml, Parasuraman, & Berry, 1990).

77

## Model of Delivering Services

- When delivering service, three elements must be aligned: customer's expectations, quality of actual service, and service standards.
- You must deliver service that meets or exceeds both service standards and the customer's expectations.



78

- Since expectations are changing, they must be explored as frequently as possible. This can be done through surveys, research of customer's complaints, or simply just asking customer's at each service interaction.
- Service standards must be adjusted according to the changing expectations of customers.

79

## Troubleshooting Formula

When dealing with a customer with a problem or complaint, the HEAT formula will help you handle the customer (Hartley, 1999).

H   **Hear**  
E   **Empathize**  
A   **Apologize**  
T   **Take Ownership**

80

**Hear**

Listen, do not interrupt, and acknowledge what the customer says.

81

**Empathize**

Acknowledge the customer's feelings and perceptions of the situation. Let the customer know that you heard and understand him or her.

82

**Apologize**

Let the customer know that you are sorry about the problem or inconvenience. But do not apologize too much because you might appear incompetent.

83

**Take ownership**

Take some action to fix the problem. Follow up if necessary.

84



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Question	Expert 1		Expert 2		Expert 3		Expert 4		Expert 5	
	Relevance	Clarity	Relevance	Clarity	Relevance	Clarity	Relevance	Clarity	Relevance	Clarity
77	5	5	4	5	5	4	4	4	5	5
78	5	5	5	5	5	5	5	5	5	5
79	5	5	5	5	5	5	5	5	5	5
80	5	5	5	5	5	4	4	3	5	5
81	5	5	5	5	5	5	5	5	5	4
82	5	5	5	5	5	5	5	5	5	5
83	5	5	5	5	5	5	5	5	5	5
84	5	5	5	5	5	5	5	5	5	5
85	5	5	5	5	5	5	5	4	5	5
86	5	5	5	5	5	5	5	5	5	4
87	5	5	5	5	5	5	5	5	5	5
88	5	5	5	5	5	5	4	4	5	5
89	5	5	5	5	5	5	4	4	5	5
90	5	5	5	5	5	5	5	5	5	5
91	5	5	5	5	5	5	5	5	5	5
92	5	5	5	5	5	5	5	5	5	5
93	5	5	3	5	5	4	5	5	5	5
94	5	5	5	5	5	5	5	5	5	5
95	5	5	5	5	5	5	5	5	5	4
96	5	5	5	5	5	5	5	5	5	5
97	5	5	5	5	5	5	5	5	5	5
98	5	3	5	5	5	4	5	5	5	5
99	5	5	5	5	5	5	5	3	5	5
100	5	5	4	5	5	5	5	5	4	5

## APPENDIX D

## RELIABILITY ANALYSIS OF ATTITUDE AND ACHIEVEMENT QUESTIONS

## Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
QUES1	73.8000	135.0667	.5027	.8889
QUES2	73.6000	136.2667	.6201	.8890
QUES3	73.5000	140.9444	.0000	.8923
QUES4	73.9000	133.6556	.5881	.8878
QUES5	74.0000	138.2222	.1972	.8920
QUES6	73.7000	142.2333	-.1458	.8946
QUES7	73.7000	136.9000	.3919	.8901
QUES8	73.9000	134.1000	.5500	.8882
QUES9	73.6000	142.0444	-.1592	.8939
QUES10	73.7000	134.6778	.6222	.8881
QUES11	73.9000	135.2111	.4552	.8893
QUES12	73.7000	134.9000	.5990	.8883
QUES13	73.7000	134.6778	.6222	.8881
QUES14	73.8000	142.8444	-.1848	.8955
QUES15	74.1000	131.6556	.7613	.8860
QUES16	73.7000	133.1222	.7857	.8867
QUES17	73.7000	136.2333	.4606	.8895
QUES18	73.6000	139.3778	.1964	.8917
QUES19	73.5000	140.9444	.0000	.8923
QUES20	73.7000	136.2333	.4606	.8895
QUES21	73.7000	136.4556	.4376	.8897
QUES22	73.5000	140.9444	.0000	.8923
QUES23	74.1000	133.4333	.6072	.8876
QUES24	73.6000	141.6000	-.1004	.8935
QUES25	74.0000	140.8889	-.0178	.8942
QUES26	73.6000	137.8222	.4070	.8903
QUES27	73.5000	140.9444	.0000	.8923
QUES28	73.8000	137.9556	.2428	.8914
QUES29	73.6000	143.6000	-.3636	.8951
QUES30	73.5000	140.9444	.0000	.8923
QUES31	73.5000	140.9444	.0000	.8923
QUES32	73.6000	137.8222	.4070	.8903

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
QUES33	73.6000	139.6000	.1665	.8918
QUES34	74.0000	136.2222	.3613	.8902
QUES35	73.6000	139.3778	.1964	.8917
QUES36	73.7000	136.2333	.4606	.8895
QUES37	74.0000	141.5556	-.0709	.8948
QUES38	73.6000	136.2667	.6201	.8890
QUES39	73.7000	140.0111	.0757	.8928
QUES40	73.8000	138.4000	.2033	.8918
QUES41	73.5000	140.9444	.0000	.8923
QUES42	73.6000	136.2667	.6201	.8890
QUES43	73.5000	140.9444	.0000	.8923
QUES44	73.5000	140.9444	.0000	.8923
QUES45	73.7000	136.2333	.4606	.8895
QUES46	73.5000	140.9444	.0000	.8923
QUES47	73.5000	140.9444	.0000	.8923
QUES48	73.7000	140.0111	.0757	.8928
QUES49	74.2000	139.7333	.0856	.8929
QUES50	73.5000	140.9444	.0000	.8923
QUES51	73.7000	134.9000	.5990	.8883
QUES52	74.1000	136.5444	.3425	.8904
QUES53	73.8000	135.9556	.4222	.8897
QUES54	74.0000	146.4444	-.4529	.8986
QUES55	73.7000	134.6778	.6222	.8881
QUES56	74.1000	133.8778	.5690	.8880
QUES57	73.6000	142.9333	-.2763	.8946
QUES58	73.8000	131.5111	.8304	.8856
QUES59	73.9000	130.1000	.8979	.8845
QUES60	73.6000	142.9333	-.2763	.8946
QUES61	73.8000	139.2889	.1247	.8926
QUES62	74.2000	137.2889	.3023	.8908
QUES63	73.9000	135.8778	.3987	.8898
QUES64	74.0000	137.5556	.2517	.8914
QUES65	74.4000	140.0444	.1069	.8922
QUES66	73.9000	134.7667	.4930	.8889
QUES67	74.1000	138.1000	.2124	.8918
QUES68	73.8000	135.5111	.4624	.8893
QUES69	73.8000	137.2889	.3023	.8908
QUES70	73.6000	143.8222	-.3926	.8953
QUES71	73.7000	136.9000	.3919	.8901

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
QUES72	73.5000	140.9444	.0000	.8923
QUES73	73.8000	139.0667	.1443	.8924
QUES74	73.6000	139.3778	.1964	.8917
QUES75	73.7000	138.6778	.2104	.8916
QUES76	73.6000	139.6000	.1665	.8918
QUES77	74.2000	141.5111	-.0696	.8944
QUES78	73.8000	142.8444	-.1848	.8955
QUES79	73.8000	131.7333	.8097	.8858
QUES80	74.1000	133.4333	.6072	.8876
QUES81	73.7000	138.9000	.1878	.8918
QUES82	74.0000	139.1111	.1251	.8927
QUES83	73.7000	137.3444	.3463	.8905
QUES84	73.6000	136.2667	.6201	.8890
QUES85	74.0000	130.6667	.8299	.8851
QUES86	74.2000	143.0667	-.2038	.8957
QUES87	73.8000	133.2889	.6655	.8873
QUES88	73.7000	142.2333	-.1458	.8946
QUES89	73.8000	137.0667	.3222	.8906
QUES90	73.7000	133.1222	.7857	.8867
QUES91	73.6000	139.6000	.1665	.8918
QUES92	73.5000	140.9444	.0000	.8923
QUES93	73.9000	137.6556	.2494	.8914
QUES94	73.5000	140.9444	.0000	.8923
QUES95	73.5000	140.9444	.0000	.8923
QUES96	73.8000	137.5111	.2825	.8910
QUES97	73.6000	137.8222	.4070	.8903
QUES98	73.9000	147.6556	-.5560	.8994
QUES99	73.8000	145.2889	-.3931	.8974
QUES100	73.6000	137.8222	.4070	.8903

#### Reliability Coefficients

N of Cases = 10.0

N of Items =100

Alpha = .8922

## Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
LIKE_FF	26.5000	5.6111	-.0202	.2746
LIKE_FT	25.2000	5.0667	.2094	.0409
LIKE_QS	26.3000	5.5667	-.0275	.2874
LIKE_IM	26.4000	3.1556	.4181	-.3850
CHOOSE	32.4000	6.9333	-.1468	.2949

## Reliability Coefficients

N of Cases = 10.0

N of Items = 5

Alpha = .1907



## APPENDIX E

## ACHIEVEMENT QUESTIONS

Module FF

*Instructions:* Please read the following questions and choose the best answer for each question.

1. According to PIMS, the most important single factor of business performance was \_\_\_\_\_.
  - A. public relations
  - B. product innovation
  - C. quality relative to its competitors
  - D. cost effectiveness relative to its competitors
2. According to PIMS, how can superior quality of products and services affect business performance?
  - A. Superior quality allows premium prices.
  - B. Superior quality leads to higher stock prices.
  - C. Excellent customer service increases customers' morale.
  - D. Excellent customer service increases employees' morale.
3. Based on PIMS, the quality of products and services has a positive relationship with the \_\_\_\_\_.
  - A. earnings per share
  - B. price-earnings ratio
  - C. return on equity
  - D. return on investment
4. Costs spent on improving quality in the short run were offset by \_\_\_\_ in the long run.
  - A. downsizing
  - B. reengineering
  - C. economy of scale
  - D. lower maintenance cost
5. What is the ultimate reason for a business organization to improve the quality of customer service?
  - A. Stock prices
  - B. Profit margins
  - C. Employee's morale
  - D. Customers' satisfaction

6. In the long run, superior quality of products and services leads to \_\_\_\_\_.
  - A. competition
  - B. premium prices
  - C. monopoly power
  - D. business growth
7. According to the study by Zeithaml, Parasuraman, and Berry (1990), the definition of service quality is the \_\_\_\_\_.
  - A. number of complaints in a certain period of time
  - B. extent to which customers voluntarily praise service providers
  - C. discrepancy between customers' expectations and perceptions
  - D. ratings of customers' satisfaction obtained from a particular service
8. Customers expect good service to \_\_\_\_\_ their expectations.
  - A. raise
  - B. meet
  - C. justify
  - D. support
9. Which of the following factors identified as influencing customers' expectations by ALL of the focus groups in the study by Zeithaml, Parasuraman, and Berry (1990)?
  - A. Customers' general moods
  - B. Economic and social climate
  - C. Customers' past experiences
  - D. Customers' political viewpoints
10. Which factor does NOT appear in ALL of the focus groups in the study by Zeithaml, Parasuraman, and Berry (1990)?
  - A. Personal needs of customers
  - B. Word-of-mouth communications
  - C. Benchmarked service standards
  - D. Communications from service providers
11. Who can change customers' expectations?
  - A. Current service providers
  - B. Previous service providers
  - C. Customers' friends and relatives
  - D. All of the above
12. How do customers initially evaluate a particular service?
  - A. They listen to opinions of people they know.
  - B. They compare the particular service to a competitor's.
  - C. They compare expected service to the service received.
  - D. They remember their first impression about the service.

13. According to Sanborn (1998), customers are interested in information that \_\_\_\_\_.  
A. came from reliable sources  
B. could be used as their leverage  
C. might be lucrative in the future  
D. affects their services and their lives
14. According to Sanborn (1998), the secret of the best service providers is to \_\_\_\_\_.  
A. forgive customers  
B. do better than before  
C. admit their weaknesses  
D. perform professionally
15. What can make customers remember doing business with you as personal and enjoyable?  
A. Service recovery  
B. Creating ownership  
C. Having fun with work  
D. Little touches and comments
16. How can we create a sense of ownership among frontline service providers?  
A. Surveying attitudes  
B. Giving tangible incentives  
C. Training about ownership of service  
D. Implementing teambuilding exercises
17. When exceptional service providers make mistakes, they \_\_\_\_\_.  
A. ask for help  
B. create ownership  
C. recover remarkably  
D. make teamwork work
18. Customers want to be treated like \_\_\_\_\_.  
A. insiders  
B. outsiders  
C. equal individuals  
D. superior individuals
19. Top service providers shall \_\_\_\_\_ customers' irritants.  
A. change  
B. modify  
C. quantify  
D. eliminate
20. How can a service provider impress customers during a service breakdown?  
A. Show humility and poise  
B. Do not become defensive  
C. Follow up after a complaint  
D. All of above

21. According to the study by Performance Research Associates (Zemke, 1999), what is the impressive service aspect commented upon by the greatest percentage of focus group members?
  - A. Dealt with customers' upset
  - B. Showed empathy for customers
  - C. Asked for help from supervisors
  - D. Created added value for customers
22. Service providers should NOT \_\_\_\_\_ when dealing with a service breakdown.
  - A. apologize
  - B. act quickly
  - C. shift blame
  - D. show urgency
23. When dealing with upset customers, service providers should \_\_\_\_\_ admit an organization's error.
  - A. doubtfully
  - B. analytically
  - C. proactively
  - D. tremendously
24. What kind of skill is necessary when dealing with a service breakdown?
  - A. Selling skill
  - B. Supervising skill
  - C. Instructional skill
  - D. Interpersonal skill
25. Based on to the study by Performance Research Associates (Zemke, 1999), which one is NOT an impressive service aspect when customers experienced a service breakdown?
  - A. Consulted supervisors immediately
  - B. Created added value for the customers
  - C. Acted quickly to solve the problem, showed urgency
  - D. Didn't become offensive, but showed humility and poise

Module FT

*Instructions:* Please read the following questions and choose the best answer for each question.

1. According to Fritz (1999), the goal of business is to \_\_\_\_\_.
  - A. be the best in industry
  - B. maintain a steady growth
  - C. compete with major business rivals
  - D. create more value for the customer
2. Why is customer service important to a business organization?
  - A. Customer service needs to be benchmarked with other competitors in the market.
  - B. Customers' complaints must be minimized in order to increase business reputation.
  - C. Today's competition is fierce and customer service could be a competitive edge for business.
  - D. Customer service creates more value to customers which means more money for business.
3. How can we improve the VALUE for our customers?
  - A. Ask customers to provide us feedback
  - B. Build a strong relationship with our suppliers
  - C. Implement total quality management program
  - D. Improve our products to do more for customers
4. The more VALUE created for customers, the more \_\_\_\_\_.
  - A. loyal your customers are
  - B. morale in your organization
  - C. confidence in doing business
  - D. money your business is making
5. According to Fritz (1999), the VALUE that customers receive is equal to \_\_\_\_\_.
  - A. service ratings
  - B. selling price and profit margin
  - C. satisfaction ratings received from customers
  - D. utility that customers get from products and service
6. Who is responsible for creating the VALUE delivered to customers?
  - A. Everyone in an organization
  - B. Chief Executive Officer (CEO)
  - C. Frontline customer service representatives
  - D. Supervisors of customer service representatives

7. According to Harris (2000), expectations are \_\_\_\_\_.
  - A. wishes, hopes, or desires to be treated with respect and dignity
  - B. personal visions of the result that will come from our experience
  - C. individual preferences set prior to an event that are socially constructed
  - D. anticipated performance of service providers based on various service dimensions
8. According to Harris (2000), the truth about customers' expectations is that \_\_\_\_\_.
  - A. they are usually too high
  - B. they are usually too costly to provide
  - C. service providers must get used to the expectations
  - D. service providers must live up to the expectations
9. According to Harris (2000), it is important to understand customers' expectations because they affect \_\_\_\_\_.
  - A. customers' worldview
  - B. how customers behave
  - C. customers' personal needs
  - D. service providers' expectations
10. Customers' primary expectations of restaurant service are \_\_\_\_\_.
  - A. good service delivered promptly
  - B. tasty food and its appealing presentation
  - C. courtesy from servers and restaurant owners
  - D. having food without cooking for themselves
11. Which statement is TRUE?
  - A. Customers only have a set of primary expectations for each service.
  - B. Many times, customers' expectations are not too costly to provide.
  - C. Challenging customers are not worth dealing with and should be avoided.
  - D. Courtesy of service providers is a primary expectation and should be upheld.
12. According to Harris (2000), the myth of customers' expectations among service providers is that they think that \_\_\_\_\_.
  - A. their customers are irrational
  - B. their customers are superior to them
  - C. they cannot influence customers' expectations
  - D. they cannot live up to customers' expectations
13. According to Harris (2000), the key to meeting or exceeding customers' expectations is to \_\_\_\_\_.
  - A. know what they expect
  - B. manage their expectations
  - C. stand out from competitors
  - D. allow room for improvement

14. According to Harris (2000), what is the first step in delivering customer service?
  - A. Maintain consistency.
  - B. Become familiar with your customers.
  - C. Tell your customers what they can expect.
  - D. Ask your customers what their expectations are.
15. Customers' expectations are always \_\_\_\_\_.
  - A. hidden
  - B. illusive
  - C. changing
  - D. challenging
16. Do not \_\_\_\_\_ what you cannot deliver.
  - A. ponder
  - B. conduct
  - C. promise
  - D. prioritize
17. According to Harris (2000), we should communicate with customers about \_\_\_\_\_ when delivering service.
  - A. what they can expect
  - B. what they will be told
  - C. how much they are appreciated
  - D. how they made the right decision
18. When delivering customer service, a service provider should maintain \_\_\_\_\_.
  - A. energy
  - B. elegance
  - C. persistence
  - D. consistency
19. When becoming familiar with customers, what should a service provider find out?
  - A. Who are they?
  - B. What they like and dislike?
  - C. What kind of business they do?
  - D. All of the above.
20. Which statement is FALSE?
  - A. Customers like to be acknowledged of their situations.
  - B. Customers want to be treated as the most important person.
  - C. The goal of customer service to provide satisfaction to important customers.
  - D. The responsibility of service providers is to treat customers as the most important person.

21. According to Harris (2000), what are the major concepts that service providers can use when dealing with challenging customers?
  - A. Honesty and respect
  - B. Empathy and respect
  - C. Empathy and honesty
  - D. Satisfaction and respect
22. What is the characteristic of challenging customers?
  - A. Angry
  - B. Immature
  - C. Indecisive
  - D. All of above
23. According to Harris (2000), the truth about challenging customers is that \_\_\_\_\_.
  - A. they tend to be emotional
  - B. they are not always irrational
  - C. service providers cannot avoid them
  - D. service providers must be patient with them
24. According to Harris (2000), what is required when dealing with challenging customers?
  - A. Emotional balance
  - B. Minimal aggression
  - C. True communication
  - D. Intensive supervision
25. When dealing with challenging customers, service providers need to listen and \_\_\_\_\_.
  - A. give feedback
  - B. solve problems
  - C. document complaints
  - D. report immediate supervisor



Module QS

*Instructions:* Please read the following questions and choose the best answer for each question.

1. When calculating the direct value of a customer, which item is NOT included?
  - A. Customers' ratings
  - B. Customer lifetime in years
  - C. Number of transactions per year
  - D. Average revenue per customer per transaction
2. Why customer service is important to a business organization?
  - A. Happy customers spend more money when they are happy.
  - B. Happy customers generate value for a business organization.
  - C. Quality service correlates with revenue and customer lifetime.
  - D. Quality service generates a positive atmosphere for customers.
3. From the restaurant business exercise, how can a customer contribute INDIRECTLY?
  - A. A happy customer complains less
  - B. A happy customer makes referrals
  - C. A happy customer gives suggestions
  - D. A happy customer invests in a restaurant's stock
4. Based on the calculation of the value of one customer, how can we increase that value?
  - A. Decrease the indirect cost of business
  - B. Increase the number of happy customers
  - C. Decrease the transaction cost of business
  - D. Increase the number of transactions per year
5. When the average revenue per customer per transaction INCREASES, \_\_\_\_\_.
  - A. direct value increases
  - B. direct value decreases
  - C. indirect value increases
  - D. indirect value decreases
6. Based on calculating the value of the customer, when happy customers tell FEWER people, \_\_\_\_\_.
  - A. direct value increases
  - B. direct value decreases
  - C. indirect value increases
  - D. indirect value decreases

7. According to Zeithaml, Parasuraman, and Berry (1990), which one is NOT a service dimension?
  - A. Access
  - B. Validity
  - C. Security
  - D. Reliability
8. What is the definition of the service dimension “tangibles?”
  - A. Those indispensable adjuncts to any customer service strategy.
  - B. The appearance of physical facilities, equipment, and materials.
  - C. The ability to perform the promised service dependably and accurately.
  - D. The possession of required skills and knowledge to perform the service.
9. Mr. A asked, “Does my service representative avoid using technical jargon?” Which service dimension is Mr. A assessing?
  - A. Validity
  - B. Tangibles
  - C. Reliability
  - D. Communication
10. Which service dimension can be described as freedom from danger, risk, or doubt?
  - A. Access
  - B. Validity
  - C. Security
  - D. Communication
11. When assessing the COURTESY service dimension of a bank, which question is a customer likely to ask?
  - A. Does the bank have a good reputation?
  - B. Does a bank tellers have a pleasant manner?
  - C. Is it safe for me to use the bank’s automatic teller machines?
  - D. How easy is it for me to talk to senior bank officials when I have a problem?
12. How would a customer describe “reliability” of service?
  - A. The willingness to help customers and provide prompt service
  - B. The trustworthiness, believability, and honesty of the service provider
  - C. The ability to perform the promised service dependably and accurately
  - D. The possession of the required skills and knowledge to perform a service

13. When problems are identified, based on Wulf's (1999) service protocol, service providers should take \_\_\_\_ action to solve the problems.
  - A. careful and systematic
  - B. efficient and effective
  - C. immediate and helpful
  - D. powerful and proactive
14. How can we "empower" service employees?
  - A. Train employees at all levels to perform as customer champions.
  - B. Consistently cooperate with one another throughout the organization.
  - C. Constantly train front-line service employees in both technical and interpersonal skills.
  - D. Employ people at all levels in the organization who feel responsible to service customers.
15. "Proactive Systems" protocol is to \_\_\_\_\_.
  - A. make it easy for customers to do business with us
  - B. involve employees at all levels in making decisions
  - C. train employees at all levels to perform as customer champions
  - D. understand and anticipate what customers want and give it to them
16. Enrolling and mobilizing all employees to participate in a customer-focused work environment is called \_\_\_\_\_ protocol.
  - A. Motivation
  - B. Service metrics
  - C. Decision making
  - D. Customer satisfaction
17. What is the goal of "service-oriented culture?"
  - A. Quick problem solving
  - B. Total customer satisfaction
  - C. Good and consistent reputation
  - D. Building a quality service culture
18. How can we follow the "internal assessments" protocol?
  - A. By consistently cooperating with one another throughout the organization to work smarter, do more with less, and reach shared service goals
  - B. By regularly surveying our staff to find out how satisfied they are with the work environment and asking for their suggestions to provide better service
  - C. By reporting service metrics so that employees are constantly aware of the importance of customer service and progress in achieving service goals
  - D. By operating with a clear feedback system that encourages ongoing customer feedback, listening carefully to their suggestions, and implementing ideas to improve customer service

19. What should we ask when conducting “Internal Assessments?”
  - A. Are employees satisfied with their jobs?
  - B. Are customers satisfied with current services?
  - C. What are internal benefits of our products and services?
  - D. What are our strengths, weaknesses, opportunities, and threats?
20. When handling an upset customer, service providers should maintain a(n) \_\_\_\_\_ tone.
  - A. joyful
  - B. energetic
  - C. consistent
  - D. respectful
21. What should service providers do with a customers’ cursing?
  - A. Ignore it
  - B. Repeat it
  - C. Document it
  - D. Report to manager
22. Which one of the following is a troubleshooting technique when handling an upset customer?
  - A. Listen fully
  - B. Change the topic
  - C. Call a supervisor
  - D. Avoid the customer
23. What topic should a service provider discuss with an upset customer?
  - A. Whose fault is it?
  - B. How to calm down.
  - C. What can be done?
  - D. How to respect each other.
24. BEFORE discussing the topic in the previous question, what should a customer service representative do?
  - A. Maintain silence briefly.
  - B. Let the customer cool off.
  - C. Let the customer apologize.
  - D. Solve the problem quickly.
25. What should service providers do when they find an upset customer in a main customer service area?
  - A. Notify their immediate supervisors.
  - B. Ask the customer politely to be quiet.
  - C. Close the main customer service area.
  - D. Remove the customer from the main area.

Module IM

*Instructions:* Please read the following questions and choose the best answer for each question.

1. Which one of the following is a component of the Model of Business Viability?
  - A. Financial services
  - B. Financial performance
  - C. Critical information
  - D. Performance highlights
2. Based on the Model of Business Viability, why is customer service important to a business organization?
  - A. Happy customers bring more profits and growth.
  - B. Customer service is an indicator of business success.
  - C. Customer satisfaction generates improvement initiatives.
  - D. Customer service is a strategic aspect of a business organization.
3. According to the Model of Business Viability, initiatives of continuous improvement are perceived as \_\_\_\_\_.
  - A. customer satisfaction
  - B. good business climate
  - C. credible business practice
  - D. total quality management
4. According to the Model of Business Viability, \_\_\_\_\_ drives financial viability.
  - A. proactive systems
  - B. customer satisfaction
  - C. good business protocols
  - D. continuous improvement
5. Based on the Model of Business Viability, how can an organization's business performance affect further improvement?
  - A. It creates a better image for improvement initiatives.
  - B. It supplies more resources for improvement initiatives.
  - C. It attracts innovative investors for improvement initiatives.
  - D. It sustains loyal customers in both the short and the long run.
6. The three components in the Model of Business Viability are \_\_\_\_\_.
  - A. statistically linked
  - B. dynamically linked
  - C. proactively reinforced
  - D. systematically related

7. A customer's assessment of a service is influenced by \_\_\_\_\_.
  - A. perceived value
  - B. perceived services
  - C. service availability
  - D. emotional responses
8. According to the study by Zeithaml, Parasuraman, and Berry (1990), which one of the following is a factor influencing customers' expectations?
  - A. Affordability
  - B. Personal needs
  - C. Industry standards
  - D. Personal commitment
9. According to Zeithaml, Parasuraman, and Berry (1990), the key to superior customer service is to \_\_\_\_\_.
  - A. maximize customers' satisfaction ratings
  - B. minimize customers' complaints at all cost
  - C. balance customers' expectations and their perceptions
  - D. balance the morale of customers and that of service providers
10. How can service providers influence customers' expectations?
  - A. Negotiate proactively
  - B. Reset them preemptively
  - C. Communicate effectively
  - D. Deliver service promptly
11. Which factor does NOT directly affect customer satisfaction?
  - A. Service standards
  - B. Perceived services
  - C. Expectations of services
  - D. Continuous improvement initiatives
12. Which statement is FALSE?
  - A. Customers carry a set of expectations with them.
  - B. Customers form expectations based on word of mouth of others.
  - C. Customers close a gap between their expectations and perceptions.
  - D. Customers evaluate service by comparing their expectations and perceptions.
13. Which one of the following is a component of the Model of Delivering Services?
  - A. Quality assurance
  - B. Quality of service
  - C. Quality of product
  - D. Quality management

14. After we find out about customers' changed expectations, what should we do next?
  - A. Adjust service standards
  - B. Manage the expectations
  - C. Validate the expectations
  - D. Strengthen service teams
15. Based on the Model of Delivering Service, service providers must deliver service that meets or exceeds \_\_\_\_\_.
  - A. shared goals
  - B. service standards
  - C. determined quotas
  - D. return on investment
16. What is the implication of customers' changing expectations?
  - A. Service providers must change their expectations as well
  - B. Service providers must keep their services consistent through time
  - C. The expectations must be explored as frequently as possible
  - D. The expectations must be manipulated as frequently as possible
17. How can service providers find out about customers' expectations?
  - A. Surveys
  - B. Ask customers
  - C. Research on customers' complaints
  - D. All of the above
18. Which statement is FALSE?
  - A. If customers' expectations are changed, then service standards will be changed.
  - B. If customers' expectations are changed, then the quality of actual service will be changed.
  - C. If service standards are changed, then customers' expectations will be changed.
  - D. If service standards are changed, then the quality of actual service will be changed.
19. What does the HEAT formula stand for?
  - A. Humble, Emotional, Active, Timely
  - B. Honest, Exceptional, Assertive, Trustworthy
  - C. Hear, Empathize, Apologize, Take ownership
  - D. Humility, Empathy, Assertiveness, Tangibles
20. When should you use the HEAT formula?
  - A. While handling phone calls
  - B. While listening to customers
  - C. While dealing with upset customers
  - D. While managing the customer service department

21. Why should a service provider NOT apologize too much?
  - A. It shows insincerity.
  - B. It takes too much time.
  - C. He/she might appear incompetent.
  - D. He/she might experience adverse effects.
22. According to the HEAT formula, after taking action to fix customers' problem, what might also be appropriate?
  - A. Follow-up
  - B. Documentation
  - C. Taking a break
  - D. Reflecting on the action
23. Based on the HEAT formula, when dealing with an upset customer, service providers should acknowledge the customers' \_\_\_\_\_.
  - A. language used
  - B. hidden motivation
  - C. perceptions of the situation
  - D. ability to handle problems
24. Based on the HEAT formula, what does an upset customer want?
  - A. To dominate a situation.
  - B. To express their emotions.
  - C. To be heard and understood.
  - D. To reconcile presenting conflict.
25. How would a customer service provider make an upset customer even MORE upset?
  - A. By apologizing too much
  - B. By interrupting customers
  - C. By showing remorse and guilt
  - D. By solving the problem quickly



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